

Catalogue of the type-specimens of the Sphingidae stored at the Zoologische Staatssammlung München (ZSM)

(Insecta, Lepidoptera)

Michael A. Miller and Axel Hausmann

Miller, M. A. & A. Hausmann (1999): Catalogue of the type-specimens of the Sphingidae stored at the Zoologische Staatssammlung München (ZSM) (Insecta, Lepidoptera). – *Spixiana* **22/3**: 209–243

This type list gives a survey on all the type specimens of the family Sphingidae (Lepidoptera, Insecta) stored at the Zoologische Staatssammlung München, Germany (ZSM). It contains 79 name bearing types of available taxa, and 65 so called name bearing types of unavailable (infrasubspecific) taxa. The actual systematic position is added. 54 Taxa are represented by paratypes only. In the ZSM 198 Sphingidae-taxa are represented by any type material. These are listed in a synopsis with the corresponding box numbers of coll. ZSM. There is a total of 417 type-specimens (paratype series included). All the label data are available and accessible in the ZSM in data base format (MS Access).

Michael A. Miller, Axel Hausmann, Zoologische Staatssammlung München, Münchhausenstr. 21, D-81247 München, Germany.

Introduction

The presented work is aimed to provide a survey over all the specimens of Sphingidae stored at the Zoologische Staatssammlung München (ZSM) which are labeled as “type specimens”. The main purpose is to give a working basis for taxonomists. Therefore no comment is given, when the taxonomical status of some of the types is unclear. It has to be cleared up in future.

The nomenclature follows mainly the “Catalogue of the Family-Group, Genus-Group and Species-Group Names of the Sphingidae of the World” by Charles A. Bridges. The citation of the species in D’Abreas “Sphingidae mundi” and “Die Schwärmer der westlichen Paläarktis” by Danner, Eitschberger & Surholt is given if there is any. For neotropical taxa the “Atlas of Neotropical Lepidoptera, Checklist: Part 4B, Drepanioidea – Bombycoidea – Sphingoidea” edited by J. P. Heppner is cited. Most recent changes in nomenclature and systematics are sometimes taken into consideration but are not exhaustive.

The following list consists of four parts:

- I. Name-bearing types of available taxa, i.e. holotypes, lectotypes, and potentially name-bearing types from syntype-series: The original reference, literal label data, actual name and status.
- II. Name-bearing “types” (original specimens) of nomenclaturally unavailable taxa: Original reference, labels data, systematic comments.
- III. List of taxa, which are represented in the ZSM just by paratypes (with actual name and status).
- IV. Synopsis: Alphabetical list of all the taxa represented at the ZSM by any type material: With original name and box number.

Abbreviations

OD: Original description
GP: Preparation of genitalia
ZSM: Zoologische Staatssammlung München (Germany)

Handwriting on labels is written in *italics*, printings in usual letters. Single lines separated by /, whole labels by //.

I. Name bearing types of available taxa

acra Gehlen, 1935

Temnora reutlingeri ssp. *acra* Gehlen, 1935: Ent. Z. 49 (2): 11, f. 2 & 3.

Syntype: White card: "Manow / D O. Afr." [Tansania] // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Temnora reutlingeri acra* / ♂-Type Gehlen", rear: "Manow / East-Africa", right side downwards: "1934" // red card with black margin: "Holotypus / *Temnora reutlingeri* / ssp. *acra* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" // white card with black margin: "K. Kernbach det. 55 / TEMNORA / GRISEATA R&f." [box 509], [GP on specimen].

Actual status: Subspecies of *Temnora reutlingeri* (Holland, 1889) (Bridges 1993).

aguacana Gehlen, 1944

Sesia titan ssp. *aguacana* Gehlen, 1944: Ent. Z. 57 (21): 166.

"Type": White card: "Rio Aguacatal / Colomb. West. Cord. / 2000m / Coll. Fassl." // White card with red margin: "*Sesia titan aguacana* / Gehlen / ♂-Type Gehlen" // red card with black margin: "Holotypus / *Sesia titan* / f. *aguacana* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 407].

Actual status: Subspecies of *Aellopos titan* (Cramer, [1777]) (Bridges 1993; Carcasson & Heppner 1996).

albina Gehlen, 1941

Pseudosphinx tetrio ssp. *albina* Gehlen, 1941: Ent. Z. 55 (24): 186.

Syntype: White card, left side upright: "Staatssamml. / München"; level: "Cuba / Habana" // yellow card with black margin, left side upright: "Coll. Gehlen"; level: "*Pseudosphinx tetrio albina* / ♂-Type Gehlen" // red card with black margin: "Holotypus / *Pseudosph. tetrio* / ssp. *albina* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 315].

Actual status: Subspecies of *Pseudosphinx tetrio* (Linnaeus, 1771) (Bridges 1993). Carcasson & Heppner 1996 retain this taxon synonym of *tetrio*.

alegrensis Closs, 1915

Xylophanes alegrensis Closs, 1915: Ent. Mitt. 4 (10/12): 291.

Holotype: [♂] White card with red margin: "Porto alegre / coll. A. Closs" // white card: "Süd Brasilien / Porto Alegre / Zoologische / Staatssammlung / München" // grey card with red margin: "*alegrensis* / Closs" // red card with black margin: "Holotypus / *Xylophanes alegrensis* Closs / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 549], [GP on specimen].

Actual status: Species of *Xylophanes* Hübner, 1819 (D'Abrera 1986; Carcasson & Heppner 1996; Bridges 1993). The holotype of the OD is female, the type in the ZSM is male, with an added GP.

argentinica Daniel, 1949

Protoparce florestan ssp. (f. oec.) *argentinica* Daniel, 1949: Mitt. Münch. Ent. Ges. 35-39: 230, pl. 2, fig. 2.

Holotype: [♂] White card: "Tucuman / Argentinien / Schreiter. leg. / F. Nosswitz I. 28" // red card with black margin: "Holotypus / *Protop. florestan* / ssp. *argentinica* / Daniel / Zool. Staatssammlung München" [box 108].

Actual status: Subspecies of *Manduca florestan* (Stoll, [1782]) (Bridges 1993). Carcasson & Heppner 1996 mention it as synonym of *florestan*.

***bilineata* Gehlen, 1928**

Xylophanes rothschildi ssp. *bilineata* Gehlen, 1928: Int. Ent. Z. 21 (42): 394.

"Type"?: [♂] White card: "Peru / Marcapata / Madre de Dios / 71° w.L. 13,5° s.Br. / Zoologische / Staatssammlung / München" // red card: "Typus" // red card with black margin: "Holotypus / *Xyloph. rothschildi* / f. *bilineata* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 549].

Actual status: Subspecies of *Xylophanes rothschildi* (Dognin, 1895) (Bridges 1993). Carcasson & Heppner 1996 call this taxon "*binineata*" (incorrect subsequent spelling) and regard it as a synonym of *rothschildi*. It is not clear that this specimen is type material. The type locality of the original description (Chanchamayo, Peru) does not correspond to the label of the specimen of ZSM.

***borneensis* Gehlen, 1940**

Oxyambulyx tattina ssp. *borneensis* Gehlen, 1940: Ent. Z. 54 (18): 140.

Holotype: [♂] White card: "Borneo" // white card, left side upright: "Zoolog. Staats- / sammlung München", level: "Süd-Borneo / Samarinda / 9.XI.39" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Oxyambulyx / tattina borne= / ensis. Type. Gehlen / S. O. Borneo*", right side downwards: "1940" // red card with black margin: "Holotypus / *Oxyambulyx / tattina borneensis / Gehlen / Zool. Staatssammlung München*" // white card with black margin: "K. Kernbach det. 1966 / *Oxyambulyx tattina* J." // white card: "Sammlung / Gehlen" [box 178], [GP on specimen].

Actual status: Subspecies of *Ambulyx tattina* (Jordan, 1919) (Bridges 1993).

***bossardi* Gehlen, 1926**

Protoparce bossardi Gehlen, 1926: Int Ent. Z. 20 (21): 173.

Holotype: White card: "Mexico / St. Cruz / Zoologische / Staatssammlung / München" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Protoparce / bossardi ♂ m / Gehlen.*" // red card with black margin: "Typus Nr. / *Protop. lefeburei / ssp. bossardi / Gehlen / Zoologische / Staatssammlung / München*" // white card: "Sammlung / Gehlen" [box 085], [GP on specimen].

Actual status: Species of *Manduca Hübner*, [1807] (Bridges 1993) or synonym of *Manduca lefeburei* (Guérin-Ménéville, 1844) (Carcasson & Heppner 1996), respectively.

The spelling "*bossarai*" (as used in Bridges 1993) is an incorrect original spelling according to art. 32c (ii) ICZN (1985). Gehlen devotes this species explicitly to a person named "Bossard". Therefore "*bossarai*" is a printer's error (the second "a" is furthermore printed in an unusual way) and has to be corrected to "*bossardi*" in accordance with art. 32d (justified emendation according to art. 33b (ii)).

***cana* Gehlen, 1940**

Oxyambulyx substrigilis ssp. *cana* Gehlen, 1940: Ent. Z. 54 (18): 140, f. 3.

Holotype: [♂] White card: "Borneo" // white card: "Samarinda, / Süd-Borneo / 9.-11.39" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Oxyambulyx / substrigilis / cana Type Gehlen / S. O. Borneo*" // red card with black margin: "Holotypus / *Oxyamb. substrigilis / cana Gehlen / Zool. Staatssammlung München*" // white card with black margin: "K. Kernbach det. 1966 / *Oxyambulyx / substrigilis / brooksi Cl.*" // white card: "Sammlung / Gehlen" [box 175], [GP on specimen].

Actual status: Subspecies of *Ambulyx substrigilis* (Westwood, 1847) (Bridges 1993).

***castanella* Gehlen, 1942**

Theretra castanella Gehlen, 1942: Veröff. dt. Kolon.- u. Übersee-Mus. 3: 286.

Syntype: White card with black margin: "Bombay / H. Hartmann" // white card with red margin, left side upright: "Coll. Gehlen", level: "*Theretra 1942 / castanella / ♂ - Gehlen / Type*" // red card with black margin: "Holotypus / *Theretra / castanella Gehlen / Zool. Staatssammlung München*" // white card: "Sammlung / Gehlen" [box 666], [GP on specimen].

Actual status: Species of *Theretra Hübner*, [1819] (D'Abrera 1986; Bridges 1993).

celebensis Jordan, 1919

Oxyambulyx semifervens ssp. *celebensis* Jordan, 1919: Novit. zool. 26: 192, f. 3.

"Pseudotype": White card: "Tondano / Celebes" // white card with red margin, written over two unseparated labels, left side upright: "Coll. Gehlen Coll. Gehlen", level: "*Oxyambulyx* / *semifervens* / *celebensis* R. & J. / ♀ - *Type Gehlen* / 1928" // red card with black margin: "Holotypus / *Oxyamb.* *semifervens* / *celebensis* R. & J. / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 181].

Actual status: Subspecies of *Oxyambulyx semifervens* (Walker, [1865]) (mentioned in D'Abrera 1986 as not known to him with Austaut as author of the OD with a question mark, while Bridges 1993 gives the correct original citation).

Rothschild (1919) mentions the holotype of *O. semifervens celebensis* as number 101 in his "List of types of Lepidoptera in the Tring Museum, I. Sphingidae". That means that the type identity of the specimen of the ZSM, which is labeled as Type by Gehlen himself is erroneous.

centrosplendens Gehlen, 1940

Protoparce centrosplendens Gehlen, 1940: Ent. Z. 54 (18): 139, f. 1.

"Type": [♀] White card: "Peru" // White card: "*Peru* / *Satipo* / Zoologische / Staatssammlung / München" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Protoparce* / *centrosplendens* / *Type Gehlen* / *Satipo, Peru*", right side downwards: "1940" // red card with black margin: "Typus Nr. / *Protop.* *centrosplendens* / *Gehlen* / Zoologische / Staatssammlung / München" [box 095], [GP on specimen].

Actual status: Synonym of *Manduca brunalba* (Clark, 1929) (Bridges 1993; Carcasson & Heppner 1996).

ceylonica Kernbach, 1960

Marumba dryas ssp. *ceylonica* Kernbach, 1960: Deut. Ent. Z., N.F. 7 (1/2): 190.

Holotype: [♂] White card with black margin: "*Kandy* / (*Ceylon*) [Sri Lanka] / coll. A. Closs" // red card: "Typus" // red card with black margin: "Holotypus / *Marumba dryas* / *ceylonica* Kb. / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" // white card with black margin: "K. Kernbach det. 1959 / *Marumba* / *dryas ceylonica*" [box 221], [GP on specimen].

Actual status: Subspecies of *Marumba dryas* (Walker, 1856) (not mentioned in Bridges 1993).

chinchilla Gehlen, 1942

Protoparce chinchilla Gehlen, 1942: Ent. Z. 56 (16): 127.

Syntypes: 1 ♂: White card: "*Peru* / *Charcani* / *bei Arequipa* / 2500m / Zoologische / Staatssammlung / München" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Protoparce* / *chinchilla* / ♂ - *Type Gehlen*" // red card with black margin: "♂ Typus Nr. / *Pr. chinchilla* *Gehlen* / Zoologische / Staatssammlung / München" // white card: "Sammlung / Gehlen" [box 095] [GP on specimen]

1 ♀: White card: "Febr. 27" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Protoparce* / *chinchilla* / ♀ - *Type Gehlen*" // red card with black margin: "♀ Typus Nr. / *Pr. chinchilla* *Gehlen* / Zoologische / Staatssammlung / München" // white card: "Sammlung / Gehlen" [box 095].

Actual status: Species of *Manduca* Hübner, [1807] (D'Abrera 1986; Bridges 1993; Carcasson & Heppner 1996).

coreana Gehlen, 1941

Callambulyx tatarinovi ssp. *coreana* Gehlen, 1941: Ent. Z. 55 (23): 178.

Syntype: White card with black margin: "Saishin / Nord-Korea" // yellow card with red margin: "*Callambulyx tatarinovi* / ssp. *coreana* / *Gehlen* / *Holotype* ♂ 1941" // red card with black margin: "Holotypus / *Call. tatarinovi* / ssp. *coreana* *Gehlen* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 259].

Actual status: Subspecies of *Callambulyx tatarinovi* (Bremer & Grey, 1852) (Bridges 1993).

coronata Gehlen, 1930

Amblypterus tigrina ssp. *coronata* Gehlen, 1930: Ent. Z. 44 (12): 174, f. 1.

Syntype: [♂] White card: "West Columbien / Rio Micay / Febr.-April 1928" // blue card with red margin, written over two unseparated labels, left side upright: "Coll. Gehlen Coll. Gehlen", level: "*Amblypterus* / *tigrina*

f. / *coronata* / *Type Gehlen / 1930* // red card with black margin: "Holotypus / *Ampl. tigrina* / *ssp. coronata Gehlen* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 163].

Actual status: Subspecies of *Adhemarius tigrina* (R. Felder, 1874) (Bridges 1993; Carcasson & Heppner 1996).

cubensis Gehlen, 1941

Xylophanes tersa ssp. *cubensis* Gehlen, 1941: Ent. Z. 55 (23): 179.

Syntype: [♀] White card: "*Cuba / Habana / Zoologische / Staatssammlung / München*" // blue card with black margin, right side downwards: "Coll. Gehlen", level: "*Xylophanes tersa / cubensis / Type 1941 Gehlen*" // red card with black margin: "Holotypus / *Xyloph. tersa / ssp. cubensis / Gehlen* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 558].

Actual status: Subspecies of *Xylophanes tersa* (Linnaeus, 1771) (Bridges 1993; Carcasson & Heppner 1996).

delanoi Kernbach, 1962

Epistor lugubris ssp. *delanoi* Kernbach, 1962: Opusc. Zool. 63: 11.

Holotype: [♂] White card with black margin, left side upright: "Staatslg. / München", level: "Galapagos-Inseln / Santa Cruz / Academy Bay / 7.V.59 / leg. J. Foerster" // red card: "Typus" // red card with black margin: "Holotypus / *Epistor lugubris / delanoi Kernb.* / Zool. Staatssammlung München" / white card with black margin: "K. Kernbach det. 60 / *Epistor lugubris / delanoi Kb.*" [box 390], [GP on specimen].

Actual status: Subspecies of *Enyo lugubris* (Linnaeus, 1771) (Bridges 1993; D'Abrera 1986; Carcasson & Heppner 1996).

dispersa Kernbach, 1962

Erinnyis alope ssp. *dispersa* Kernbach, 1962: Opusc. Zool. 63: 9, f. 6.

Holotype: [♂] White card with black margin, left side upright: "Staatslg. / München", level: "Galapagos-Inseln / Santa Cruz / Academy Bay / 9.V.59 / leg. J. Foerster" // red card: "Typus" // red card with black margin: "Holotypus / *Erinnyis alope / dispersa Kb.* / Zool. Staatssammlung München" / white card with black margin: "K. Kernbach det. 1960 / *Erinnyis alope / dispersa Kb.*" [box 325], [GP on specimen].

Actual status: Subspecies of *Erinnyis alope* (Drury, 1773) (Bridges 1993; D'Abrera 1986; Carcasson & Heppner 1996).

distincta Gehlen, 1934

Maassenia heydeni ssp. *distincta* Gehlen, 1934: Ent. Z. 48 (8): 60, f. 3.

Syntype: [♂] White card with black margin: "*Ampanihy / Madagascar / 7.2.33.*" // white card with black margin: "Genitaluntersuchung / B. Gehlen" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Maassenia / heydeni distincta / Type Gehlen*" // red card with black margin: "Holotypus / *Maassenia heydeni / ssp? distincta Gehlen* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 496], [GP on specimen].

Later, Gehlen transferred this taxon from subspecific to species rank (Ent. Z. 55 (23): 179).

Actual status: Species of *Maassenia* Saalmüller, 1884 (Bridges 1993).

dominicana Gehlen, 1928

Protoparce rustica ssp. *dominicana* Gehlen, 1928: Int. Ent. Z. 21 (42): 391, pl.2, f. 2.

Holotype: [♀] White card: "*St. Domingo / Zoologische / Staatssammlung / München*" // blue card with red margin, written over two unseparated labels, left side upright: "Coll. Gehlen Coll. Gehlen", level: "*Protoparce / rustica do= / minicana Gehlen / Type 1928 Gehlen / St. Domingo*" // red card with black margin: "Typus Nr. / *Pr. rustica f. domini- / cana / Zoologische / Staatssammlung / München*" [box 093].

Actual status: Subspecies of *Manduca rustica* (Fabricius, 1775) (Bridges 1993) or synonym of *Manduca rustica cubana* (Wood, 1915), (Carcasson & Heppner 1996) respectively. Gehlen (1928) stated that the holotype of *P. rustica dominicana* was deposited in the Berlin Museum (now the Zentralinstitut der Humboldt-Universität zu Berlin, Germany Institut für Systematische Zoologie, Museum für Naturkunde) and so the type status of the specimen in the ZSM remains to be confirmed.

encantada Kernbach, 1962

Erinnyis ello ssp. *encantada* Kernbach, 1962: Opusc. Zool. 63: 10.

Holotype: [♂] White card with black margin, left side upright: "Staatsslg. / München", level: "Galapagos-Inseln / Santa Cruz / Academy Bay / 7.V.59 / leg. J. Foerster" // red card: "Typus" // red card with black margin: "Holotypus / *Er. ello* / *encantada* Kb / Zool. Staatssammlung München" / white card with black margin: "K. Kernbach det. 1960 / *Erinnyis ello* / *encantada* Kb." [box 336], [GP on specimen].

Actual status: Subspecies of *Erinnyis ello* (Linnaeus, 1758) (Bridges 1993; D'Abrera 1986; Carcasson & Heppner 1996).

exiguus Gehlen, 1942

Protoparce lucetius ssp. *exiguus* Gehlen, 1942: Ent. Z. 56 (16): 127.

Syntype: [♂] White card: "Uruguay / VI. 34. / Zoologische / Staatssammlung / München" // red card: "Typus" // red card with black margin: "Typus Nr. / *Pr. lucetius* / *f. exiguus* Geh. / Zoologische / Staatssammlung / München" // white card: "Sammlung / Gehlen" [box 077].

Actual status: Subspecies of *Manduca lucetius* (Stoll, [1780]) (Bridges 1993) or synonym of *Manduca lucetius* ssp. *lucetius* (Cramer, 1780) (Carcasson & Heppner 1996), respectively.

extrema Gehlen, 1926

Protoparce extrema Gehlen, 1926: Int. Ent. Z. 20 (21): 174.

"Type": [♂] White card with black margin: "Rio Songo / Bolivia, 750m / Coll. Fassl." // blue card with black margin, left side upright: "Type / Coll. Gehlen", level: "Protoparce / extrema / Gehlen" // red card with black margin: ♂ Typus Nr. / *Protop. extrema* / Gehlen / Zoologische Staatssammlung / München." // white card: "Sammlung / Gehlen" [box 103].

"Type": [♀] White card with black margin: "Rio Songo / Bolivia / 750m / Coll. Fassl" // blue card with black margin, left side upright: "♀ Type / Coll. Gehlen", level: "Protoparce / extrema ♀ / Gehlen" // red card with black margin: ♀ Typus Nr. / *Protop. extrema* Gehlen / Zoologische Staatssammlung / München." // white card: "Sammlung / Gehlen" [box 103].

Actual status: Species of *Manduca Hübner*, [1807] (Bridges 1993; Carcasson & Heppner 1996).

In the ZSM there are two specimens labeled as "Type", a male and a female. Only the male specimen is mentioned in the original description as a "type", the female is not type material.

falcata Gehlen, 1922

Eurypteryx falcata Gehlen, 1922: Deut. Ent. Z. 1922 (3): 360, f.

Syntype: [♂] White card: "Kaiser Wilh. Land [Irian Jaya] / Berg Gelu / Zoologische / Staatssammlung / München" // grey card with red margin, right side downwards: "N. Guinea", level: "Eurypteryx falcata / Gehlen / Type 1922 / Berg Gelu, Kais. Wilh. Land" // red card with black margin: "Holotypus / *Eurypteryx* / *falcata* Gehlen / Zool. Staatssammlung München" [box 516].

Actual status: Species of *Eurypteryx* Felder, 1874 (D'Abrera 1986; Bridges 1993).

falcifera Gehlen, 1943

Hemeroplanes falcifera Gehlen, 1943: Ent. Z. 57 (7): 50, f. 2.

Syntype: [♂] White card: "Zacualpan, III." // white card with black margin, left side upright: "Staatssamml. / München", level: "Mex / Zacualpan" [Mexico] // red card: "Typus" // red card with black margin: "Holotypus / *Hemeroplanes* / *falcifera* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 381].

Actual status: Species of *Callionima* Lucas, 1857 (Bridges 1993; Carcasson & Heppner 1996; D'Abrera 1986).

fassli Gehlen, 1928

Xylophanes rothschildi ssp. *fassli* Gehlen, 1928: Int. Ent. Z. 21 (42): 394, pl. 1, f. 5.

Holotype: White card with black margin: "Rio Songo / Bolivia / 750m / Coll. Fassl" // blue card with red margin, left side upright: "Coll. Gehlen", level: "1928 / *Xylophanes* / *rothschildi* / *fassli* Gehlen / Type ♂" // red card with black margin: "Holotypus / *Xyloph. rothschildi* / *f. fassali* Gehlen / Zool. Staatssammlung München"

// white card: "Sammlung / Gehlen" [box 549].

Actual status: Subspecies of *Xylophanes rothschildi* (Dognin, 1895) (Bridges 1993). Carcasson & Heppner 1996 retain it synonym.

florilega Kernbach, 1962

Celerio lineata ssp. *florilega* Kernbach, 1962: Opusc. Zool. 63: 16.

Holotype: [♂] White card with black margin, left side upright: "Staatslg. / München", level: "Galapagos-Inseln / Santa Cruz / Finca Castro / 200m 9.V.59 / leg. J. Foerster" // red card: "Typus" // red card with black margin: "Holotypus / *Cel. lineata* / *florilega* Kernb. / Zool. Staatssammlung München" // white card with black margin: "K. Kernbach det. 1960 / *Celerio lineata* / *florilega* Kb." [box 609], [GP on specimen].

Actual status: Subspecies of *Hyles lineata* (Fabricius, 1775) (Bridges 1993; Carcasson & Heppner 1996).

formosana Gehlen, 1941

Clanis bilineata ssp. *formosana* Gehlen, 1941: Ent. Z. 55 (23): 178.

Syntype: White card with black margin: "Formosa / coll. A. Closs" // yellow card with red margin: "*Clanis bilineata* / *formosana* / Gehlen / Holotype ♀ 1941" // red card with black margin: "Holotypus / *Clanis bilineata* / (ssp?) *formosana* / Gehlen / Zool. Staatssammlung München" [box 186].

Actual status: Subspecies of *Clanis bilineata* (Walker, 1866) (Bridges 1993).

fuscata Gehlen, 1941

Theretra oldenlandiae ssp. *fuscata* Gehlen, 1941: Ent. Z. 55 (23): 179.

Syntype: White card: "Ceram [Indonesia] / Zoologische / Staatssammlung / München" // yellow card with black margin, left side upright: "Coll. Gehlen", level: "1941 / *Theretra olden-* = / *landiae fuscata* / ♂ - Type Gehlen" // red card with black margin: "Holotypus / *Th. oldenlandiae* / ssp. *fuscata* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 663].

Actual status: Subspecies of *Theretra oldenlandiae* (Fabricius, 1775) (Bridges 1993).

gehleni Bender, 1942

Rhagastis lunata ssp. *gehleni* Bender, 1942: Mitt. Münch. Ent. Ges. 32 (2/3): 649.

"Type": [♂] White card: "Simla 2600m / Simla Hill [NW India]" // white card with black margin: "*Rh. lunata* / ssp. *gehleni* / Bender" // red card with black margin: "Type / ~~coll.~~ Dr. R. Bender" // white card: "Sammlung / Gehlen" [box 671].

Actual status: Subspecies of *Rhagastis lunata* (Rothschild, 1900) (Bridges 1993).

gehleni Closs, 1922

Sesia gehleni Closs, 1922: Int. Ent. Z. 16 (14): 118.

"Type": [♂] White card with black margin, left side upright: "Coll. Gehlen", level: "Rio Songo / Boliv." [Bolivia] // white card with red margin: "*gehleni* / Type Closs" // red card with black margin: "Holotypus / *Sesia gehleni* Closs / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 405].

Actual status: Species of *Aellopos* [Hübner, 1819] (Bridges 1993; Carcasson & Heppner 1996). It is mentioned in D'Abrera 1986 as not known to him.

There are no labels on the specimen that indicate Fassl as collector and an altitude of 750 m as collecting locality as it is written in the OD.

grandis Daniel, 1949

Protoparce grandis Daniel, 1949: Mitt. Münch. Ent. Ges. 35-39: 231, pl. 3.

Holotype: [♀] White card: "Hamborgo Velho / Rio grande d. Sul / Brasilien C. Ertl" // red card with black margin: "Holotypus / *Protoparce* / *grandis* Daniel / 1949 / Zool. Staatssammlung München" [box 108].

Actual status: Species of *Manduca* Hübner [1807] (Bridges 1993; Carcasson & Heppner 1996), mentioned in D'Abrera 1986 as unknown to the author.

***hannemanni* Closs, 1917**

Xylophanes hannemanni Closs, 1917: Ent. Mitt. 6 (1/3): 33.

Holotype: [♂] White card with red margin: "Mexico / coll. A. Closs" // red card: "Typus" // grey card with red margin: "*hannemanni* / Closs" // red card with black margin: "Holotypus / *Xylophanes* / *hannemanni* Closs / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 538].

Actual status: Species of *Xylophanes* Hübner, 1819 (D'Abrera 1986; Carcasson & Heppner 1996; Bridges 1993).

***heinrichi* Closs, 1917**

Xylophanes heinrichi Closs, 1917: Ent. Mitt. 6 (4/6): 133, f.

Holotype: [♂] White card with black margin: "Amazonas / 11. [month illegible]. 12 / coll. A. Closs" // grey card with red margin: "*heinrichi* / Closs" // red card with black margin: "Holotypus / *Xyloph.* *heinrichi* / Closs. / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" // white card with black margin: "K. Kernbach det. 1965 / *Xylophanes* / *laelia* Dru." [box 561], [GP on specimen].

Actual status: Species of *Xylophanes* Hübner, 1819 (Bridges 1993). Mentioned in D'Abrera 1986 as not known to him. Carcasson & Heppner 1996 put it into synonymy of *X. laelia* (Druce, 1878).

***intermedia* Gehlen, 1934**

Amorpha populi ssp. *intermedia* Gehlen, 1934: Ent. Z. 48 (8): 60, f. 2.

Syntype: [♂] White card: "Malatia (Kurd. oc.) [Turkey] / 4.V. / Coll Höfer, Wien" // red card: "Typus" // red card with black margin: "Holotypus / *Am. populi* / ssp. *intermedia* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 296].

Actual status: Subspecies of *Laothoe populi* (Linnaeus, 1758) (Bridges 1993) or synonym of *Laothoe populeti* (Bienert, 1870) (Danner et al. 1998), respectively.

***intermissa* Gehlen, 1941**

Theretra alecto ssp. *intermissa* Gehlen, 1941: Ent. Z. 55 (24): 186, f. 2.

Syntype: Yellow card with black margin, left side upright: "Coll. Gehlen", level: "Taschkent" [Usbekistan] // yellow card with red margin: "*Theretra alecto* / ssp. *intermissa* / Gehlen / Holotype ♂ 1941" // red card with black margin: "Holotypus / *Th. alecto* / ssp. *intermissa* / Gehlen / Zool. Staatssammlung München" [box 657].

Actual status: Subspecies of *Theretra alecto* Linnaeus, 1758 (Bridges 1993) or synonym of *Theretra alecto cretica* (Boisduval, 1827) (Danner et al. 1998), respectively.

***jankowskii* Gehlen, 1932**

Clanis undulosa ssp. *jankowskii* Gehlen, 1932: Ent. Rundsch. 49 (8): 66, f. 3.

Syntype: [♂] White card with black margin: "Saishin / Nord-Korea / 14.7.28" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Clanis undu= / losa jankowskii* / Type Gehlen" // red card with black margin: "Holotypus / *Cl. undulosa* / ssp. *jankowskyi* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 187].

Actual status: Subspecies of *Clanis undulosa* Moore, 1879 (Bridges 1993). D'Abrera 1986 mentions this taxon as individual form of *Clanis bilineata* Walker, 1866 distinguished from *undulosa* by having white tibiae instead of black.

***lemonia* Gehlen, 1941**

Nyceryx lemonia Gehlen, 1941: Ent. Z. 55 (24): 185, f. 1.

"Type": [South America] Grey card with red margin: "*Nyceryx* / *lemonia* Gehlen / Holotype ♂ 1941" // red card with black margin: "Holotypus / *Nyceryx* / *lemonia* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" // white card with black margin: "K. Kernbach det. 1964 / *Nyceryx continua* / WKR." [box 399], [GP on specimen].

Actual status: Synonym of *Nyceryx continua* (Walker, 1856) (Bridges 1993; Carcasson & Heppner 1996). The holotype of *N. lemonia* differs markedly from the specimens of *N. continua* in terms of e.g. coloration and thorax pattern, with which it was synonymized.

leucophila Gehlen, 1931

Protoparce leucophila Gehlen, 1931: Ent. Z. 45 (14): 201, f.1-3.

"Type": [♂] White card with black margin: "Mexico / ZACUALPAN / VI. 13" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Protoparce / leucophila Gehlen / Mexiko / Type. 1931*" // red card with black margin: "Typus Nr. / *Protop. leucophila / Gehlen / Zoologische / Staatssammlung / München.*" // white card: "Sammlung / Gehlen" [box 083], [GP on specimen].

Actual status: Species of *Manduca* Hübner, [1807] (Bridges 1993), or synonym of *Manduca morelia* (Druce, 1894) (Carcasson & Heppner 1996), respectively.

libanotica Gehlen, 1932

Celerio nicaea ssp. *libanotica* Gehlen, 1932: Ent. Rundsch. 49 (9): 85.

Syntype: White card: "Syria / Zahlé / Libanon or." // white card: "21.VIII.30 / Zoologische / Staatssammlung / München" // yellow card with red margin, right side downwards: "Coll. Gehlen", level: "*Celerio nicaea / libanotica / ♂ - Type Gehlen*" // red card with black margin: "Holotypus / *Cel. nicaea / ssp. libanotica Geh. / Zool. Staatssammlung München*" [box 600].

Actual status: Subspecies of *Hyles nicaea* (Prunner, 1798) (D'Abrera 1986; Bridges 1993; Danner, Eitschberger & Surholt 1998).

lineatoides Gehlen, 1934

Celerio lineata ssp. *lineatoides* Gehlen, 1934: Ent. Z. 48 (8): 62.

"Type": [♂] White card: "Uruguay / VI. 34. / Zoologische / Staatssammlung / München" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Celeri lineata / lineatoides / Type Gehlen*" // red card with black margin: "Holotypus / *Cel. lineata / ssp? lineatoides / Zool. Staatssammlung München*" // white card: "Sammlung / Gehlen" [box 609].

Actual status: Subspecies of *Hyles lineata* (Fabricius, 1775) (Bridges 1993; Carcasson & Heppner 1996).

luciae Gehlen, 1928

Protoparce sexta ssp. *luciae* Gehlen, 1928: Int. Ent. Z. 21 (42): 391, pl. 1, f. 2.

"Type": [♂] Yellow card with black margin, left side upright: "Coll. Gehlen", level: "Kl. Antillen / St. Lucia" // red card: "Type" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*P. sexta / luciae / Type Gehlen*" // red card with black margin: "Typus Nr. / *Protop. sexta ssp. luciae / Gehlen / Zoologische / Staatssammlung / München.*" // white card with black margin: "K. Kernbach det. 59 / gl[e]iwiß synonym / zu *sexta paphus*" [box 063], [GP on specimen].

Actual status: Subspecies of *Manduca sexta* (Linnaeus, 1763) (Bridges 1993) or synonym of *M. sexta jamaicensis* (Butler, 1877) (Carcasson & Heppner 1996) respectively.

luridus Gehlen, 1944

Hippotion eson ssp. *luridus* Gehlen, 1944: Ent. Z. 57 (21): 166.

"Type": [♀] White card: "Kamerun / Mulange- / Dummer / Zoologische / Staatssammlung / München" // blue card with black margin, vertically scratched into two parts: "*Hippotion eson lu= / ridus Gehlen / Type 1943*" // red card glued on the blue label positioned in the last line between "Type" and "1943": "Typus" // red card with black margin: "Holotypus / *Hipp. eson / f. luridus Gehlen. / Zool. Staatssammlung München*" // white card: "Sammlung / Gehlen" [box 638].

Actual status: Subspecies of *Hippotion eson* (Cramer, [1779]) (Bridges 1993).

Either type locality or labeling doubtful: Holotypic specimen with label "Kamerun". Type locality in the original description is "Réunion" [= Bourbon]. According to Viette & Guillermet (1996) the distribution of *H. eson* is whole Africa south of the Sahara, Seychelles, Comores, Madagascar, la Réunion, and Maurice. They consider the taxon *luridus* as being strongly doubtful.

macromaculata Gehlen, 1940

Oxyambulyx macromaculata Gehlen, 1940: Ent. Z. 54 (18): 140, f. 2.

"Type": [♂] White card: "Borneo" // white paper: "Samarinda, / Süd-Borneo / 9.-11-39" // yellow card with red margin, left side upright. "Coll. Gehlen", level: "*Oxyambulyx / macromaculata / Type Gehlen / S. O. Borneo*", right side downwards: "1940" // red card with black margin: "Holotypus / *Oxyambulyx / macromaculata / Gehlen / Zool. Staatssammlung München*" // white card: "Sammlung / Gehlen" [box 174], [GP on specimen].

Actual status: Synonym of *Ambulyx obliterata* Rothschild, 1920 (Bridges 1993; D'Abbrera 1986).

macrops Gehlen, 1933

Calasymbolus myops ssp. *macrops* Gehlen, 1933: Ent. Z. 47 (10): 80, f.5.

"Type": [♂] White card with black margin: "Mexico / TEHUACAN" // blue card with black margin, left side upright: "Coll. Gehlen", level: "*Calasymbolus / myops macrops / Type Gehlen*" // red card with black margin: "Holotypus / *Calas. myops / ssp. macrops Gehlen / Zool. Staatssammlung München*" // white card: "Sammlung / Gehlen" [box 286], [GP on specimen].

Actual status: Synonym of *Paonias myops* (J. E. Smith, 1797) (Bridges 1993; D'Abbrera 1986).

mahadeva Gehlen, 1935

Clanis mahadeva Gehlen, 1935: Ent. Z. 48 (24): 188, f. 1-3.

"Pseudotype": White card: "Poona / S. India" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Clanis / mahadeva ♂ / Type Gehlen*" // red card with black margin: "Holotypus / *Clanis / mahadeva Gehlen / Zool. Staatssammlung / München*" // white card: "Sammlung / Gehlen" [box 189].

Actual status: Species of *Clanis* (Hübner, 1819) (Bridges 1993).

Holotype with label "South India: Poona" but the type locality in the original description is "Bombay". The status of this specimen is clarified by Kitching & Cadiou (in press).

malatiatus Gehlen, 1934

Celerio hippophaes ssp. *malatiatus* Gehlen, 1934: Ent. Z. 48 (8): 61, f. 4.

Syntype: [♂] White card: "Asia min. / Malatya-Tecde / VIII" // white card: "4.VIII.32. / Zoologische / Staatssammlung / München" // yellow card with red margin, left side upright: "Coll. Gehlen", level: "*Celerio hippophaes / malatiatus Gehlen / Type 1934*" // red card with black margin: "Holotypus / *Cel. hippophaes / ssp. malatiatus Gehlen / Zool. Staatssammlung München*" // white card: "Sammlung / Gehlen" [box 605].

Actual status: Subspecies of *Hyles hippophaes* (Esper, [1793]) (Bridges 1993) or synonym of *Hyles hippophaes caucasica* (Denso, 1913) (Danner et al. 1998), respectively.

martini Gehlen, 1943

Pachygonia martini Gehlen, 1943: Ent. Z. 57 (7): 49, f. 1.

Syntype: [♂] White card with black margin, left side upright: "Staatssamml. / München", level: "*Peru / Chanchamayo / La Merced*" // red card // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Pachygonia / martini Gehlen / Type Peru / 1943*" // red card with black margin: "Holotypus / *Pachygonia / martini Gehlen / Zool. Staatssammlung München*" [box 395], [GP on specimen].

Actual status: Species of *Pachygonidia* Fletcher & Nye, 1982 (Bridges 1993; Carcasson & Heppner 1996). It is also mentioned in D'Abbrera 1986 as not known to the author, but the above syntype from the ZSM illustrated in the Appendix.

meridionalis Closs, 1917

Smerinthus planus ssp. *meridionalis* Closs, 1917: Ent. Mitt. 6 (4/6): 133.

"Type": [♂] White card with black margin: "Kanton (China) / e. l. 12.VIII.13 / coll. A. Closs" // grey card with red margin: "*pl. meridionalis / Closs*" // red card with black margin: "Holotypus / *Sm. planus / f. meridionalis Closs / Zool. Staatssammlung München*" // White card: "Sammlung / Gehlen" [box 276].

Actual status: Subspecies of *Smerinthus planus* Walker, 1856 (Bridges 1993).

meridionalis Gehlen, 1931

Smerinthus kindermanni ssp. *meridionalis* Gehlen, 1931: Ent. Z. 45 (14): 202, f 2, 3.

"Type": [♂] White card: "Stargyugsa / Bashahr State / 5900m. August" [North India] // yellow card with red margin, written over one and a half labels, left side upright: "Gehlen Coll. Gehlen", level: "*Smerinthus / kindermanni / meridionalis / Type Gehlen*" // red card with black margin: "Holotypus / *Sm. kindermanni / ssp. meridionalis* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 263], [GP on specimen].

Actual status: Subspecies of *Smerinthus kindermanni* Lederer, 1853 (Bridges 1993). Replacement name for the preoccupied taxon *meridionalis* Gehlen, 1931: *Smerinthus kindermanni gehleni* Eitschberger & Lukhtanov, 1996.

mexicana Gehlen, 1933

Ampeloeca myron ssp. *mexicana* Gehlen, 1933: Ent. Z. 47 (14): 115, f. 1.

Holotype: [♂] White card with black margin: "Mexico / MISANTLA / V. 12" // blue card with red margin, left side upright: "Coll. Gehlen", level: "*Ampeloeca / myron mexicana / = / na Gehlen Type*" // red card with black margin: "Holotypus / *Ampeloeca myron / ssp. mexicana / Gehlen* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 475], [GP on specimen].

Actual status: Subspecies of *Darapsa myron* (Cramer, 1780) (Bridges 1993; Carcasson & Heppner 1996).

montana Daniel & Wolfsberger, 1955

Mimas tiliae ssp. *montana* Daniel & Wolfsberger, 1955: Z. Wien. Ent. Ges. 40: 63.

Holotype: Yellowish card, left side upright. "Plank / München", level: "Bretter= / keller b. / Innsbruck / Tirol" // white card with black margin: "Ter. s. / Innsbruck Ug. / Plank leg. / DANIEL MÜNCHEN" // red card: "Holotypus ♂ / *M. tiliae montana / Dan. et Wolfsb.*" // white card: "Abgebildet in / Forster-Wohlfahrt / Schmetterlinge Mitteleuropas / Bd. 3 Taf. 12 Fig. 3" [box 253].

Actual status: Subspecies of *Mimas tiliae* (Linnaeus, 1758) (Bridges 1993). According to Pittaway (1993) and Danner et al. (1998), *montana* is just a form produced by high altitude or by chilling of the pupa of common *Mimas tiliae*. Therefore this taxon is synonymized by these authors.

norfolki Kernbach, 1962

Xylophanes norfolki Kernbach, 1962: Opusc. Zool. 63: 14, f. 12, 13.

Holotype: [♂] White card with black margin, left side upright: "Staatsslg. / München", level: "Galapagos-Inseln / Santa Cruz / Finca Castro / 200m 5.V.59 / leg. J. Foerster" // red card with black margin: "Holotypus / *Xylophanes / norfolki Kernb.* / Zool. Staatssammlung München" // white card with black margin: "K. Kernbach det. 60 / *Xylophanes / norfolki Kb.*" [box 558], [GP on specimen].

Actual status: Species of *Xylophanes* Hübner, 1819 (Bridges 1993; D'Abbrera 1986; Carcasson & Heppner 1996).

orientis Daniel, 1949

Pholus obliquus ssp. *orientis* Daniel, 1949: Mitt. Münch. Ent. Ges. 35-39: 230, pl. 2, fig. 3.

Holotype: [♂] White card with black margin, left side upright: "Staatssamml. / München", level: "S. Catharina / Hansa Humboldt / X." [South Brazil] // red card with black margin: "Holotypus / *Pholus obliquus / ssp. orientis Daniel* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 432].

Actual status: Subspecies of *Eumorpha obliquus* (Rothschild & Jordan, 1903) (Bridges 1993; Carcasson & Heppner 1996).

otiosus Kernbach, 1957

Epistor bathus ssp. *otiosus* Kernbach, 1957: Deut. Ent. Z. N. F. 4 (1/2): 79, f. 3; pl. 1, f. 5.

Holotype: [♂] White card: "Rio Songo / Ost Bolivia / 750m / coll. Fassl." // red card: "Typus" // red card with black margin: "Holotypus / *Epistor bathus / otiosus Kb.* / Zool. Staatssammlung München" // white card with black margin: "K. Kernbach det. 56 / *EPISTOR / BATHUS / OTIOSUS KERNBACH*" [box 393], [GP on specimen].

Actual status: Subspecies of *Enyo bathus* (Rothschild, 1904) (Bridges 1993). Downgraded by Carcasson & Heppner (1996) to synonymy of *bathus*.

***pallescens* Closs, 1917**

Xylophanes pallescens Closs, 1917: Ent. Mitt. 6 (4/6): 134.

"Type": [♀] White card with black margin: "Pozuzo (Peru) / coll. A. Closs" // grey card with red margin: "*pallescens* / Closs" // red card with black margin: "Holotypus / *Xylophanes libya* / f. (ssp?) *pallescens* / Closs / Zool. Staatssammlung München" [box 561].

Actual status: Species of *Xylophanes* Hübner, 1819 (Bridges 1993). Downgraded by Carcasson & Heppner (1996) to synonymy of *X. libya* (Druce, 1878).

***pallidula* Daniel, 1949**

Protoparce incisa ssp. (f. oec.) *pallidula* Daniel, 1949: Mitt. Münch. Ent. Ges. 35-39: 232, pl. 2, fig. 1.

Holotype: [♂] White card: "Mexico / Colima / VII. 24. / Zoologische / Staatssammlung / München" // red card with black margin: "Holotypus / *Protoparce / incisa* / ssp. *pallidula* Daniel / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 86].

Actual status: Subspecies of *Manduca incisa* Walker, 1856 (Bridges 1993). Downgraded by Carcasson & Heppner (1996) to synonymy of *M. incisa*.

***paraguayensis* Gehlen, 1933**

Xylophanes anubus ssp. *paraguayensis* Gehlen, 1933: Ent. Z. 47 (14): 116, f. 2.

Syntype: [♂] White paper, vertical scratched into two parts: "Molinas / Decemb. 25 / *Xylophanes? poss / fosteri*" [Paraguay] // blue card with black margin, left side upright: "Coll. Gehlen", level: "*Xylophanes / anubus para / = / guayensis / Type Gehlen*" // red card with black margin: "Holotypus / *Xyloph. anubus / ssp. paraguayensis / Gehlen* / Zool. Staatssammlung München" [box 547].

Actual status: Subspecies of *Xylophanes anubus* (Cramer, [1777]) (Bridges 1993; Carcasson & Heppner 1996).

***prestoni* Gehlen, 1926**

Protoparce prestoni Gehlen, 1926: Int. Ent. Z. 20 (21): 172.

Lectotype: [♂] White card, upper border with black margin: "Manicore / Amazonas" // blue card with red margin; left side upright: "Type / Coll. Gehlen", level: "*Protoparce / prestoni m / Gehlen*" // red card with black margin: "Typus Nr. / *Protop. prestoni / Gehlen* / Zoologische / Staatssammlung / München." // white card: "Sammlung / Gehlen" // white card with black margin: "K. Kernbach det. 56 / *Protoparce / incisa / prestoni Gehlen*" [box 086], [GP on specimen].

Actual status: Species of *Manduca* Hübner, [1807] (D'Abrera 1986; Carcasson & Heppner 1996) or subspecies of *Manduca incisa* Walker, 1856 (Bridges 1993), respectively.

***reducta* Gehlen, 1930**

Protoparce reducta Gehlen, 1930: Int. Ent. Z. 24 (20): 217, f. 1.

"Type": Blue card, left side upright: "Coll. Gehlen", level: "Peru" // red card: "♀ Type" // red card with black margin: "Typus Nr. / *Protop. reducta / Gehlen* / Zoologische / Staatssammlung / München." [box 077].

Actual status: Species of *Manduca* Hübner, [1807] (D'Abrera 1986; Bridges 1993; Carcasson & Heppner 1996). *Protoparce reducta* was described from an unstated number of males, so it is unclear whether this specimen is type material.

***reussi* Closs, 1920**

Xylophanes reussi Closs, 1920: Ent. Mitt. 9 (4/5): 86, f.

Holotype: [♀] White card with red margin: "Brasilien / coll. A. Closs" // red card: "Typus" // grey card with red margin: "*reussi / Closs*" // red card with black margin: "Holotypus / *Xylophanes / reussi Closs.* / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 537].

Actual status: Species of *Xylophanes* Hübner, 1819 (Bridges 1993). Downgraded by Carcasson & Heppner (1996) to synonymy of *X. pistacina* (Boisduval, [1875]).

rufescens Daniel, 1949

Perigonia pallida ssp. *rufescens* Daniel, 1949: Mitt. Münch. Ent. Ges. 35-39: 233.

Holotype: [♂] Blue card with black margin, left side upright: "Coll. Gehlen", level: "Matto Grosso / (Stadt) [Brazil] // red card with black margin: "Holotype / *Perigonia pallida* / ssp. *rufescens* Daniel. / Zool. Staatssammlung München" // white card "Sammlung / Gehlen" [box 401].

Actual status: Subspecies of *Perigonia pallida* Rothschild & Jordan, 1903 (Bridges 1993; Carcasson & Heppner 1996).

rydbergi Gehlen, 1933

Protambulyx rydbergi Gehlen, 1933: Ent. Z. 47 (10): 79, f. 1, 2, 3, 4.

Syntype: [♂] White card: "West-Columbien / Altaquem 500 m. / März-Juni 1927" // blue card with red margin, left side upwards: "Coll. Gehlen", level: "*Protambulyx rydbergi* / Type Gehlen" // red card with black margin: "Holotypus / *Protambulyx rydbergi* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 146], [GP on specimen].

Actual status: Species of *Protambulyx* Rothschild & Jordan, 1903 (Bridges 1993; Carcasson & Heppner 1996). It is mentioned in D'Abrera 1986 as unknown to the author.

samoana Gehlen, 1941

Theretra oldenlandiae ssp. *samoana* Gehlen, 1941: Ent. Z. 55 (23): 179.

"Type": [♂] White card: "Samoa / Klingmüller" // yellow card with black margin, left side upright: "Coll. Gehlen", level: "*Theretra olden= landiae samoana* / Type 1941 Gehlen" // red card with black margin: "Holotypus / *Th. oldenlandiae* / ssp. *samoana* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 663], [GP on specimen].

Actual status: Subspecies of *Theretra oldenlandiae* (Fabricius, 1775) (Bridges 1993). The specimen in the ZSM is male, while in the OD the holotype is erroneously stated to be a female.

septentrionalis Gehlen, 1944

Pachylia syces ssp. *septentrionalis* Gehlen, 1944: Ent. Z. 57 (21): 166.

Syntype: [♀] White card with black margin, left side upright: "Staatssamml. / München", level: "Mex / Cernavaca [Mexico] / VII. 14. // grey card with black margin: "*Pachylia syces sep= tentrionalis* Gehlen / Type 1943" // red card glued on the grey label positioned in the last line between "Type" and "1943": "Typus" // red card with black margin: "Holotypus / *Pachylia syces* / ssp? *septentrionalis* / Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 356].

Actual status: Subspecies of *Pachylia syces* (Hübner, 1822) (Bridges 1993; Carcasson & Heppner 1996).

sericus Gehlen, 1940

Xylophanes sericus Gehlen, 1940: Ent. Z. 54 (18): 143, f. 6.

Lectotype: [♂] White card: "Peru / Satipo / Zoologische / Staatssammlung / München" // blue card with black margin, left side upright: "Coll. Gehlen", level: "*Xylophanes sericus* / Type Gehlen / Satipo, Peru", right side, downwards: "1940" // red card with black margin: "Holotypus / *Xylophanes sericus* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 538].

Actual status: Synonymized with *X. hannemanni* Closs, 1917 by Cadiou & Haxaire (1997), who designated the ZSM-type as lectotype. It is mentioned as valid species in Bridges (1993) and Carcasson & Heppner (1996), and it is mentioned in D'Abrera (1986) as not known to the author, but lectotype of the ZSM illustrated in the Appendix.

sinensis Closs, 1917

Celerio euphorbiae ssp. *sinensis* Closs, 1917: Ent. Mitt. 6 (1/3): 34.

Syntype: [♂] White card with red margin: "Kanton / (China) / coll. A. Closs" // grey card with red margin: "*e. sinensis* / Closs" // red card with black margin: "Holotypus / *Cel. euphorbiae* / ssp. *sinensis* / Closs / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 586].

Actual status: Subspecies of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993). Transferred to subspecies of *Hyles costata* (Nordman, 1851) by Pittaway (1993). Raised to species rank (although not investigated) by Danner et al. (1998).

stigmaticus Gehlen, 1940

Polyptychus stigmaticus Gehlen, 1940: Ent. Z. 54 (18): 142, f. 4.

"Type": [♂] White card with black margin, left side upwards: "Staatssamml. / München", level: "Afr. or. / Nyeri / 1800m 25.4.38." // blue card with red margin on left and upper side, left side upwards: "Coll. Gehlen", level: "Polyptychus / stigmaticus / Type Gehlen / Nyeri, O. Afrika", right side downwards: "1940" // red card with black margin: "Holotypus / Polyptychus / stigmaticus Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 210].

Actual status: Synonym of *Andriasa contraria* Walker, 1856 (Bridges 1993).

sumatrana Gehlen, 1940

Marumba dryas ssp. *sumatrana* Gehlen, 1940: Ent. Z. 54 (18): 142, f. 5.

"Type": [♂] White card with black margin, left side upright: "Staatssamml. / München", level: "Sumatra / Padang" // yellow card, left side upright: "Coll. Gehlen", level: "Marumba / dryas sumatrana / Type Gehlen / Padang", right side downwards: "1940" // red card with black margin: "Holotypus / Marumba dryas / ssp. sumatrana / Gehlen / Zool. Staatssammlung München" // white card with black margin: "K. Kernbach det. 59 / Marumba / dryas javonica / K" [box 221], [GP on specimen].

Actual status: Subspecies of *Marumba dryas* (Walker, 1856) (Bridges 1993).

syra Daniel, 1939

Hemaris fuciformis ssp. *syra* Daniel, 1939: Mitt Münch. Ent. Ges. 29 (1): 94, tab. 2, f. 18.

Holotype: White card, left side upwards: "1000 m", level: "Taurus / Marasch [Turkey] / 19.V.28 / E. Pfeiffer leg." // white card with black margin: "TAURUS / MARASCH 1000 M / PFEIFFER LEG. / 19.V.18. / Franz Daniel München" // red card: ♂ TYPE VON / *H. fuciformis* / ssp. *syra* Dan. / DANIEL MÜNCHEN" // white card: "abgeb. / Mit. Mü. E. G. / 1939; t.2 f.18" // round red self adhesive label, left on rectangular carrier: "2611" [GP-number of Eitschberger] // white card: "ZSM ♂ / Genitalprp. / No. Sp. 1385" [box 413].

Actual status: Subspecies of *Hemaris fuciformis* (Linnaeus, 1758) (Bridges 1993). Most recently upraised to species rank by Danner, Eitschberger & Surholt, 1998.

syriaca Gehlen, 1932

Amorpha populi ssp. *syriaca* Gehlen, 1932: Ent. Rundsch. 49 (18): 184, f. 2.

"Type": White card with black margin, left side upright: "Staatssamml. / München", level: "Syr. / Akbes" // red card: "Typus" // yellow card with black margin, left side upright: "Coll. Gehlen", level: "A. populi / syriaca Gehlen / ♂ - Type" // red card with black margin: "Holotypus / Am. populi / ssp. syriaca Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 296].

Actual status: Subspecies of *Laothoe populi* (Linnaeus, 1758) (D'Abrera 1986; Bridges 1993). Downgraded to synonymy of *Laothoe populeti* (Bienert, 1870) by Danner et al. (1998).

trigon Gehlen, 1926

Pholus achemon ssp. *trigon* Gehlen, 1926: Int. Ent. Z. 20 (28): 250.

"Type": [♀] White card, left side upwards: "Staatssamml. / München", level: "Mexico" // blue card with black margin, left side upwards: "Type / Coll. Gehlen", level: "Pholus / achemon - / trigon Gehlen" // red card with black margin: "Holotypus / Pholus achemon / ssp. trigon Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 436].

Actual status: Subspecies of *Eumorpha achemon* (Drury, 1773) (Bridges 1993). Downgraded by Carcason & Heppner (1996) to synonymy of *P. achemon*.

trinitatis Closs, 1917

Xylophanes neoptolemus ssp. *trinitatis* Closs, 1917: Int. Ent. Z. 11(10): 96.

Holotype: [♂] White card with black margin: "Trinidad / coll. A. Closs" // grey card with red margin: "n. *trinitatis* / Closs" // red card with black margin: "Holotypus / *Hyloph. neoptolemus* / f. *trinitatis* Closs / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" // white card with black margin: "K. Kernbach det. 1965 / *Xylophanes* / *neoptolemus* / St." [box 562], [GP on specimen].

Actual status: Subspecies of *Xylophanes neoptolemus* (Stoll, 1782) (Bridges 1993; Carcasson & Heppner 1996).

tupaci Kernbach, 1962

Pholus fasciatus ssp. *tupaci* Kernbach, 1962: Opusc. Zool. 63: 12, f. 9.

Holotype: [♂] White card with black margin, left side upwards: "Staatsslg. / München", level: "Galapagos-Inseln / Santa Cruz / Academy Bay / 26.IV.59 / leg. J. Foerster" // red card with black margin: "Typus" // red card with black margin: "Holotypus / *Pholus fasciatus* / *tupaci* Kernb. / Zool. Staatssammlung München" // white card with black margin: "K. Kernbach det. 1960 / *Pholus fasciatus* / *tupaci* Kb." [box 445], [GP on specimen].

Actual status: Subspecies of *Eumorpha fasciatus* (Sulzer, 1776) (Bridges 1993; D'Abrera 1986; Carcasson & Heppner 1996).

versicolor Gehlen, 1941

Callambulyx tatarinovi ssp. *versicolor* Gehlen, 1941: Ent. Z. 55 (23): 178.

"Type": White card: "Mongolei occ. / Provinz Ordos / Kwei-hwa-tschöng / 800 m Juli" // yellow card with red margin: "Callambulyx tatarinovi = / novi Br. u. Gr. / ssp. *versicolor* Gehlen / Holotype ♀ / 1941" // red card with black margin: "Holotypus / *Call. tatarinovi* / ssp. *versicolor* Gehlen / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 259].

Actual status: Subspecies of *Callambulyx tatarinovi* (Bremer & Grey, 1852) (Bridges 1993).

vespertilio (Esper, 1779)

Sphinx vespertilio Esper, 1779: Die Schmetterlinge 2: 178 (Suppl. 4, tab. 22, f. 4).

Holotype: [The specimens of coll. Esper are stored in little boxes which usually bear handwritings on the front, upper, and back side.] Upper side, left corner down: white label: "716"; middle: "D. / *Vespertilio*" // front side left: "480.", middle: "*Deilephila* / *Vespertilio*." [box Esp. 14].

Actual status: Species of *Hyles* Hübner, [1819] (Bridges 1993; D'Abrera 1986; Carcasson & Heppner 1996; Danner, Eitschberger & Surholt 1998).

vogli Daniel, 1949

Protoparce florestan f. oecol. *vogli* Daniel, 1949: Boln. Ent. Venez. 8 (1/2): 28, pl. I.

Holotype: White card: "Caracas / Berg Avila / P. Cor. Vogl" // white card with black margin, left side upwards: "Staatssamml. / München", level: "10./15. IV. 36." // Holotypus ♂ / *Protoparce* / *florestan* / ssp. *vogli* Daniel / Zool. Staatssammlung München" [box 107].

The name has been introduced in an available (subspecific) category, even when first published as "f. oecol.". The legend to the illustration on p. 29 of the original description is entitled "*Protoparce florestan* ssp. n. *vogli*". Bridges (1993) mentions this taxon on a subspecific rank, while Carcasson & Heppner (1996) consider it as individual form.

yupanquii Kernbach, 1962

Pholus labruscae ssp. *yupanquii* Kernbach, 1962: Opusc. Zool. 63: 13.

Holotype: [♂] White card with black margin, left side upwards: "Staatsslg. / München", level: "Galapagos-Inseln / Santa Cruz / Academy Bay / 8.V.59 / leg. J. Foerster" // red card with black margin: "Typus" // red card with black margin: "Holotypus / *Pholus labruscae* / *yupanquii* Kb. / Zool. Staatssammlung München" // white card with black margin: "K. Kernbach det. 60 / *Pholus labruscae* / *yupanquii* Kb." [box 450], [GP on specimen].

Actual status: Subspecies of *Eumorpha labruscae* (Linnaeus, 1758) (D'Abrera 1986; Bridges 1993; Carcasson & Heppner 1996).

Erroneously labeled type specimens

barnesi Clark, 1919

Protoparce barnesi Clark, 1919: Proc. New Engl. zool. Club 6: 111, pl.13 f. 3.

"(Para)type": White card, left side upright: "Staatssamml. / München", level: "Mexico / Colima / VII. 24." // blue card with red margin, left side upright: "Coll. Gehlen", level: "Protoparce / barnesi Clark / ♂-Type Gehlen" // red card with black margin: "Typus Nr. / Protop. barnesi Clark / Zoologische / Staatssammlung / München." // white card with black margin: "K. Kernbach det. / wahrscheinlich / Aberr. von PROTOPARCE / LICHENE – FLORESTAN" // white card: "Sammlung / Gehlen" [box 109].

Actual status: Erroneously listed as a synonym of *Manduca scutata* Rothschild & Jordan, 1903 (Bridges 1993). Carcasson & Heppner 1996 mention it as species of *Manduca* Hübner, [1807].

The specimen of the ZSM is labeled as "type", but this is incorrect: According to the original description there has been collected only one female specimen which was described as *barnesi*. Therefore the specimen of the ZSM, which is collected in August 1924 was subsequently labeled as type years after the original description was published. Such subsequent type designation is nomenclaturally incorrect.

corumbensis Clark, 1920

Chlaenogramma corumbensis Clark, 1920: Proc. New Engl. zool. Club 7: 68.

Protoparce corumbensis Gehlen, 1928: Int. Ent. Z. 21 (42): 379, pl. 3, f. 1.

"Holotype": White card with black margin, left side upright: "Staatssamml. / München", level: "Matto Grosso / (Stadt)" [Brazil] // blue card with red margin, written over two unseparated labels, left side upright: "Coll. Gehlen Coll. Gehlen", level: "Protoparce / corumben= / sis Clark / ♂ – Type 1928 / Gehlen / Matto Grosso" // red card with black margin: "Typus Nr. / Protop. corumbensis / Clark / Zoologische / Staatssammlung / München" // white card: "Sammlung / Gehlen" [box 109], [GP on specimen].

The original description of this taxon confers to *Chlaenogramma corumbensis* Clark, 1920. Gehlen (1928) introduced the first known male of this species in the above cited journal, designated it as type, and transferred the species into the genus *Protoparce*. Such subsequent type designation is nomenclaturally incorrect.

Actual status: Species of *Manduca* Hübner, [1807] (D'Abrera 1986; Bridges 1993; Carcasson & Heppner 1996).

tessmanni Gehlen, 1927

Theretra tessmanni Gehlen, 1927: Int. Ent. Z. 21 (22): 174, f. 1.

"Holotype": White card: "Kamerun / Zoologische / Staatssammlung / München" // red card: "♀ Type" // blue card with black margin, left side upwards: "Coll. Gehlen", level: "Th. tessman / = / ni Gehlen / ♀" // red card with black margin: "Holotypus / Theretra / tessmanni Gehlen. / Zool. Staatssammlung München" // white card: "Sammlung / Gehlen" [box 653].

Actual status: Species of *Theretra* Hübner, 1822 (according to Bridges 1993, also mentioned in D'Abrera 1986 as not known to him).

Conferring to Bridges op. cit. the holotype (♂) is stored in the Museum für Naturkunde der Humboldt-Universität, Berlin (MNHU). The specimen of the ZSM is no type at all though bearing a "holotype" label. Two years after his original description Gehlen found a female of this taxon and designed it as "♀ holotype" (Gehlen 1929: Int. Ent. Z. 22 (39): 355). Such a subsequent type designation is nomenclaturally incorrect.

II. Name bearing types of unavailable taxa

The following taxa were explicitly introduced in an infrasubspecific category and are therefore unavailable.

albescens Closs

Holotype: ♀, [Germany] Berlin, e.l. 1908, coll. Gehlen [box 567].

The original description could not be found. The type specimen is labeled *Celerio euphorbiae* f. *albescens* Closs. It is an individual form of *Hyles euphorbiae* (Linnaeus, 1758). Maybe this taxon refers to *Celerio euphorbiae* f. *albicans* Closs, 1917 (Int. Ent. Z. 11 (17): 166). Not mentioned in Bridges (1993).

annellata Closs, 1915

Celerio euphorbiae f. *annellata* Closs, 1915: Int. Ent. Z. 9(1): 1.

Holotype: ♀, Deutschland, Berlin, 1913, e.l., coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

apiciplaga Gehlen, 1930

Celerio euphorbiae ab. *apiciplaga* Gehlen, 1930: Int. Ent. Z. 24 (20): 219, f. 3.

Holotype: ♀, coll. Gehlen [box 582].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

atra Gehlen

Holotype: ♂, [box 352].

The original description could not be found. The type specimen is labeled *Pachylia ficus* f. *atra* Gehlen. It is an individual form of *Pachylia ficus* (Linnaeus, 1758).

auriflua Gehlen, 1930

Protoparce rustica rustica f. *auriflua* Gehlen, 1930: Ent. Z. 44 (12): 174.

Holotype: ♂, Blumenau m [Brazil], coll. Gehlen [box 091].

Individual form of *Manduca rustica* (Fabricius, 1775) (Bridges 1993; Carcasson & Heppner 1996).

charon Closs, 1910

Acherontia atropos f. *charon* Closs, 1910: Berl. Ent. Z. 54 (3/4): 224, pl.6, f. 13.

Holotype: ♀, Österreich, Kärnten, Landstrass, coll. Gehlen [box 025].

Individual form of *Acherontia atropos* (Linnaeus, 1758) (Bridges 1993).

cinnamomea Closs, 1911

Pholus satellitia posticatus f. *cinnamomea* Closs, 1911: Int. Ent. Z. 5(7): 51.

Holotype: ♀, Cuba, Guanamo, coll. Gehlen [box 437].

Individual form of *Eumorphia satellitia* (Linnaeus, 1771) (Bridges 1993; Carcasson & Heppner 1996, where it is called "cinnanomea", which is an incorrect subsequent spelling).

clara Closs, 1917

Mimas tiliae f. *clara* Closs, 1917: Int. Ent. Z. 11 (9): 84.

Holotype: ♀, Deutschland, Berlin, 1.1.[19]12, coll. Closs [box 249].

Individual form of *Mimas tiliae* (Linnaeus, 1758). Not mentioned in Bridges (1993).

***confluens* Closs, 1912**

Deilephila nerii f. *confluens* Closs, 1912: Int. Ent. Z. 6 (22): 123.

Holotype: ♀, Syrien, Cheiklé [box 457].

Individual form of *Daphnis nerii* (Linnaeus, 1758). Not mentioned in Bridges (1993).

***confusa* Gehlen, 1928**

Celerio costata f. *confusa* Gehlen, 1928: Int. Ent. Z. 22 (2): 16, f 4.

Holotype: ♂, Kiachta, coll. Gehlen [box 591].

Individual form of *Hyles euphorbiae costata* (Nordmann, 1851). Not mentioned in Bridges (1993).

***coniuncta* Lütkemeyer, 1920**

Deilephila euphorbiae ab. *coniuncta* Lütkemeyer, 1920: Ent. Z. 34 (13): 51.

Holotype: ♂, coll. Gehlen [box 582].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758). Not mentioned in Bridges (1993).

***connexa* Closs, 1915**

Amphypterus gannascus f. *connexa* Closs, 1915: Int. Ent. Z. 9 (1): 1.

Holotype: ♂, S-Brasilien, Sao Paolo, coll. Gehlen [box 156].

Individual form of *Adhemarius gannascus* (Stoll, [1790]) (Bridges 1993; Carcasson & Heppner 1996).

***cyanea* Gehlen, 1928**

Celerio dahli [missp.] ab. *cyanea* Gehlen, 1928: Int. Ent. Z. 21 (42): 401.

Holotype: ♂, [Italy], Sardinien, coll. Gehlen [box 589].

Individual form of *Hyles dahlia* (Geyer, 1827) (Bridges 1993).

***decolorata* Closs, 1913**

Celerio euphorbiae f. *decolorata* Closs, 1913: Int. Ent. Z. 7(11): 73.

Holotype: ♂, Deutschland, Köpenick, e. l., 02.05.1913, coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

***diluta* Closs, 1917**

Smerinthus ocellata f. *diluta* Closs, 1917: Int. Ent. Z. 11 (9): 82.

Holotype: ♀, Deutschland, Berlin, 1968, e.l., leg. Closs, coll. Gehlen [box 267].

Individual form of *Smerinthus ocellata* (Linnaeus, 1758). Not mentioned in Bridges (1993).

***eburnea* Closs, 1911**

Psilogramma menephron increta f. *eburnea* Closs, 1911: Int. Ent. Z. 5 (38): 275.

Holotype: ♀, W-China, coll. Gehlen [box 042].

Individual form of *Psilogramma menephron* (Cramer, [1780]) (Bridges 1993).

***exacta* Gehlen, 1928**

Protoparce albiplaga f. *exacta* Gehlen, 1928: Int. Ent. Z. 21 (42): 399.

Holotype: ♂, Brasilien, Matto Grosso, coll. Gehlen [box 097].

Individual form of *Manduca albiplaga* (Walker, 1856) (Bridges 1993; Carcasson & Heppner 1996).

***extensa* Closs, 1917**

Celerio euphorbiae deserticola f. *extensa* Closs, 1917: Ent. Mitt. 6 (4/6): 130 pl. 6, f. 5.

Holotype: ♂, Algerien, Algier, coll. Gehlen [box 588].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758). According to Bridges (1993) it is a valid subspecies of *H. euphorbiae*.

***extincta* Gehlen, 1928**

Herse convolvuli ab. *extincta* Gehlen, 1928: Int. Ent. Z. 21 (42): 398.

Holotype: ♂, Indonesien, Neu Mecklenburg, coll. Gehlen [box 017].

Individual form of *Agrilus convolvuli* (Linnaeus, 1758) (Bridges 1993).

***extinctus* Gehlen, 1926**

Pholus translineatus f. *extinctus* Gehlen, 1926: Int. Ent. Z. 20 (28): 251.

Holotype: ♀, [Ecuador] coll. Gehlen [box 435].

Individual form of *Eumorphia translineatus* (Rothschild, 1894) (Bridges 1993; Carcasson & Heppner 1996).

***fasciata* Closs, 1916**

Psilogramma menephron f. *fasciata* Closs, 1916: Ent. Mitt. 5 (5/8): 199.

Holotype: ♂, Neu Guinea, Mount Kekea [Kebea?] [box 043].

Individual form of *Psilogramma menephron* (Cramer, [1780]) (Bridges 1993).

***flavellus* Gehlen, 1926**

Amphlypterus palmeri f. *flavellus* Gehlen, 1926: Int. Ent. Z. 20 (28): 252.

Holotype: ♂, Brasilien, Orgel-Gebirge, N. Friburgo, 850m [box 160].

Individual form of *Adhemarius palmeri* (Boisduval, 1875) (Bridges 1993; Carcasson & Heppner 1996).

***flavescens* Closs, 1911**

Darapsa pholus f. *flavescens* Closs, 1911: Int. Ent. Z. 5(7): 51.

Holotype: ♂, USA, West Virginia, coll. Closs [box 477].

Individual form of *Darapsa pholus* (Cramer, 1776) (Bridges 1993; Carcasson & Heppner 1996). The type locality of *flavescens* according to the original description is Canada, but the specimen of the ZSM is from the USA.

***flavosignata* Closs, 1916**

Sesia fadus f. *flavosignata* Closs, 1916: Entomol. Mitteilungen 5 (5/8): 200.

Holotype: ♀, Brasilien, Blumenau, A. Closs, coll. Gehlen [box 407].

Individual form of *Aellopos fadus* (Cramer, [1775]) (Bridges 1993; Carcasson & Heppner 1996).

***fuliginosa* Closs, 1917**

Protoparce sexta paphus f. *fuliginosa* Closs, 1917: Int. Ent. Z. 11 (16): 1.

Holotype: ♀, Brasilien, Sao Paolo, coll. Gehlen [box 065].

Individual form of either *Manduca sexta* (Linnaeus, 1763) (Bridges 1993) or *Manduca sexta paphus* (Cramer, 1779) (Carcasson & Heppner 1996) respectively.

***fulvescens* Closs, 1915**

Amphlypterus gannascus f. *fulvescens* Closs, 1915: Int. Ent. Z. 9(1): 1.

Holotype: ♀, Mexico, Orizaba, coll. Gehlen [box 153].

Individual form of *Adhemarius gannascus* (Stoll, [1790]) (Bridges 1993; Carcasson & Heppner 1996).

***giganteomaculata* Gehlen, 1930**

Celerio euphorbiae conspicua ab. *giganteomaculata* Gehlen, 1930: Int Ent. Z. 24 (20): 218, f. 4.

Holotype: ♀, coll. Gehlen [box 585].

Individual form of *Hyles conspicua* (Rothschild & Jordan, 1903) (Bridges 1993). The specimen is ex err. labeled “*giganteopunctulata*” by Gehlen himself.

***grisea* Closs, 1911**

Celerio euphorbiae f. *grisea* Closs, 1911: Int. Ent. Z. 5(38): 276.

Holotype: ♂, [Germany, Stuttgart], 04.06.1911, e.l., coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

***grisescens* Closs**

Holotype: ♂, 26.03.1913, e.l., leg. Closs, coll. Gehlen [box 267].

The original description could not be found. The type specimen is labeled *Smerinthus ocellata* f. *grisescens* Closs. It is an individual form of *Smerinthus ocellata* (Linnaeus, 1758). Maybe this taxon refers to *Smerinthus ocellata* f. *grisea* Closs, 1917 (Int. Ent. Z. 11 (9): 82). Not mentioned in Bridges (1993).

***infernalis* Gehlen, 1926**

Xylophanes anubus ab. *infernalis* Gehlen, 1926: Int. Ent. Z. 20 (28): 252.

Holotype: ♂, Brasilien, Santa Catharina, leg. E. A. Böttcher [box 547].

Individual form of *Xylophanes anubus* (Cramer, 1777) (Bridges 1993; Carcasson & Heppner 1996).

***infumata* Closs, 1911**

Proserpinus (= *Pterogon* Boisid.) *proserpina* f. *infumata* Closs, 1911: Int. Ent. Z. 5 (38): 276.

Holotype: ♀, [Austria], Wien, 1.7[?].1911, coll. Gehlen [box 520].

Individual form of *Proserpinus proserpina* (Pallas, 1772) (Bridges 1993).

***interrupta* Closs, 1915**

Amplypterus gannascus f. *interrupta* Closs, 1915: Int. Ent. Z. 9 (1): 1.

Holotype: ♀, Mexico, [box 153].

Individual form of *Adhemarius gannascus* (Stoll, [1790]) (Bridges 1993; Carcasson & Heppner 1996).

***jachani* Closs, 1921**

Celerio euphorbiae f. *jachani* Closs, 1921: Int Ent Z. 15 (8): 62.

Holotype: ♂, Deutschland, Berlin, 03.07.1912, e.l., coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

***krombachi* Closs, 1917**

Celerio euphorbiae f. *krombachi* Closs, 1917: Int Ent Z. 11 (9): 82.

Holotype: ♂, Deutschland, Berlin, e.l. 1913, coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758). Not mentioned in Bridges 1993.

***luecki* Closs, 1912**

Hippotion (*Chaerocampa*) *celerio* f. *luecki* Closs, 1912: Int. Ent. Z. 6(22): 123.

Holotype: ♀, [Rep. South Africa], Natal, Durban, coll. Gehlen [box 637], *Hippotion aporodes* Closs.

Individual form of *Hippotion celerio* (Linnaeus, 1758) (Bridges 1993). The label with “*Hippotion aporodes* Closs” seems to be a former bottom-label, put to the specimen ex err.

***magicus* Gehlen, 1928**

Amplipterus gannascus f. *magicus* Gehlen, 1928: Int. Ent. Z. 21 (42): 400, pl. 2, f. 3.

Holotype: ♀, Kolumbien, West-Cordillieren, Rio Aguacatal, coll. Gehlen [box 154].

Individual form of *Adhemarius gannascus* (Stoll, 1790) (Bridges 1993; Carcasson & Heppner 1996).

***modestus* Gehlen, 1942**

Polyptychus grayi f. *modestus* Gehlen, 1942: Ent. Z. 56 (16): 128.

Holotype: ♂, [Rep. South Africa], Natal, Durban, coll. Gehlen [box 200], [GP on specimen].

Individual form of *Polyptychoides grayii* (Walker, 1856) (Bridges 1993).

***mollis* Gehlen, 1928**

Amplipterus gannascus f. *mollis* Gehlen, 1928: Int. Ent. Z. 21 (42): 399, pl. 2, f. 1.

Holotype: ♂, Brasilien, St. Catharina, leg. E. A. Böttcher, coll. Gehlen [box 157].

Individual form of *Adhemarius gannascus* (Stoll, 1790) (Bridges 1993; Carcasson & Heppner 1996).

***nebulosa* Gehlen, 1930**

Celerio euphorbiae ab. *nebulosa* Gehlen, 1930: Int. Ent. Z. 24 (20): 219, f. 7.

Holotype: ♀, Deutschland, Berlin, 1924, coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

***obscura* Closs, 1915**

Psilogramma menephron f. *obscura* Closs, 1915: Int. Ent. Z. 9 (1): 1.

Holotype: ♂, Ceylon [Sri Lanka], Kandy, coll. Gehlen [box 043].

Individual form of *Psilogramma menephron* (Cramer, [1780]) (Bridges 1993).

***obscurata* Closs, 1911**

Haemorrhagia croatica f. *obscurata* Closs, 1911: Int. Ent. Z. 5(38): 275.

Holotype: ♂, [former Yugoslavia], Dalmatien, 1910, coll. Gehlen [box 415].

Individual form of *Hemaris croatica* (Esper, 1779) (Bridges 1993).

***obscurata* Closs, 1917**

Acherontia atropos f. *obscurata* Closs, 1917: Int. Ent. Z. 11 (16): 1.

Holotype: ♀, Transvaal [South Africa], Leydenburg, coll. Gehlen [box 030].

Individual form of *Acherontia atropos* (Linnaeus, 1758) (Bridges 1993).

***olivacea* Closs, 1917**

Celerio euphorbiae f. *olivacea* Closs, 1917: Int. Ent. Z. 11 (17): 166.

Holotype: ♀, Deutschland, Berlin, e.l., 1912, coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758). Not mentioned in Bridges (1993).

***pallescens* Closs, 1922**

Marumba quercus f. *pallescens* Closs, 1922: Int. Ent. Z. 16 (6): 51.

Holotype: ♀, Ungarn, coll. Gehlen [box 232].

Individual form of *Marumba quercus* ([Denis & Schiffermüller], 1775). Not mentioned in Bridges (1993).

***pallida* Closs**

Holotype: ♀, Deutschland, Berlin, 1.1.1912, coll. Closs [box 582].

The original description could not be found. The type specimen is labeled *Celerio euphorbiae* f. *pallida* Closs. It is an individual form of *Hyles euphorbiae* (Linnaeus, 1758). This taxon is mentioned in 1913 (Int. Ent. Z. 7 (13): 89) by Closs himself and perhaps the name has been introduced in this article for the first time (nomen nudum). Not mentioned in Bridges (1993).

***pallida* Closs, 1917**

Herse cingulata f. *pallida* Closs, 1917: Int. Ent. Z. 11(16): 153.

Holotype: ♀, N-Amerika, Pennsylvania, leg. Closs, coll. Gehlen [box 003].

Individual form of *Agrius cingulata* (Fabricius, 1775) (Bridges 1993).

***pallida* Closs, 1917**

Pholus vitis f. *pallida* Closs, 1917: Int. Ent. Z. 11(16): 153.

Holotype: ♂, S-Brasilien, Santa Catarina, Blumenau [box 442].

Individual form of *Eumorpha vitis* (Linnaeus, 1758) (Bridges 1993; Carcasson & Heppner 1996).

***pallida* Closs, 1918**

Pseudoclanis postica f. *pallida* Closs, 1918: Int. Ent. Z. 11(26): 241.

Holotype: ♂, Mombasa, Bulwa, coll. A. Closs, coll. Gehlen [box 193].

Individual form of *Pseudoclanis postica* (Walker, 1856) (Bridges 1993). The type locality given in the original description was Bulwa, Usambara, which is in Tanzania.

***perversa* Gehlen, 1928**

Sphinx ligustri ab. *perversa* Gehlen, 1928: Int. Ent. Z. 21 (42): 399, pl. 3, f. 4.

Holotype: ♂, [Germany], Thüringen, Arnstadt, 1917, coll. Gehlen [box 130].

Individual form of *Sphinx ligustri* (Linnaeus, 1758) (Bridges 1993).

***purpureosignata* Closs, 1917**

Gurelca masuriensis sangaica f. *purpureosignata* Closs, 1917: Int. Ent. Z. 11(16): 154.

Holotype: ♂, Japan, coll. Gehlen [box 514].

Individual form of *Gurelca masuriensis* (Butler, 1875) (Bridges 1993).

***rangnowi* Closs, 1911**

Haemorrhagia croatica f. *rangnowi* Closs, 1911: Int. Ent. Z. 5(38): 275.

Holotype: ♂, [Russia], Kalmückensteppe, 1916, coll. A. Closs [box 415].

Individual form of *Hemaris croatica* (Esper, 1779) (Bridges 1993).

***reducta* Closs, 1917**

Haemorrhagia tityus f. *reducta* Closs, 1917: Int. Ent. Z. 11 (9): 82.

Holotype: ♂, Deutschland, Berlin, Spandau, 7.8.1915, e.l., coll. Gehlen [box 410].

Individual form of *Hemaris tityus* (Linnaeus, 1758). Not mentioned in Bridges (1993).

***rosea* Closs, 1911**

Hippotion celerio f. *rosea* Closs, 1911: Int. Ent. Z. 5(38): 276.

Holotype: ♀, Neu-Kaledonien, coll. A. Closs [box 635].

Individual form of *Hippotion celerio* (Linnaeus, 1758) (Bridges 1993).

rosea Closs, 1917

Celerio euphorbiae deserticola f. *rosea* Closs, 1917: Ent. Mitt. 6 (4/6): 130.

Holotype: ♂, Algerien, Algier, coll. Gehlen [box 588].

Individual form of *Hyles tithymali deserticola* (Bartel, 1899). Not mentioned in D'Abrera (1986), neither in Bridges (1993).

rosea Closs, 1917

Pholus satellita analis f. *rosea* Closs, 1917: Int. Ent. Z. 11(16): 153.

Holotype: ♂, [Brazil], Matto Grosso, coll. Closs [box 426].

Individual form of *Eumorphia satellitia* (Linnaeus, 1771) (Bridges 1993). Carcasson & Heppner (1996) retain it as synonym of *E. excessus* (Gehlen, 1926).

rubicunda Closs, 1916

Amphlypterus palmeri f. *rubicunda* Closs, 1916: Entomol. Mitteilungen 5 (5/8): 200.

Holotype: ♀, S-Brasilien, coll. Gehlen [box 160].

Individual form of *Adhemarius palmeri* (Boisduval, 1875) (Bridges 1993; Carcasson & Heppner 1996).

rubicunda Closs

Holotype: ♀, Java [box 492].

The original description could not be found. The type specimen is labeled *Panacra elegantulus* f. *rubicunda* Closs. It is an individual form of *Panacra elegantulus* (Herrich-Schäffer, [1856]).

rubra Closs, 1918

Celerio euphorbiae mauretanica f. *rubra* Closs, 1918: Int. Ent. Z. 11(26): 241.

Holotype: ♂, [Tunisia], Tunis, coll. Gehlen [box 587].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

rubrimargo Gehlen, 1926

Amphlypterus palmeri f. *rubrimargo* Gehlen, 1926: Int. Ent. Z. 20 (28): 252.

Holotype: ♂, Brasilien, Pirahy, coll. Gehlen [box 160].

Individual form of *Adhemarius palmeri* (Boisduval, 1875) (Bridges 1993; Carcasson & Heppner 1996).

tristis Closs, 1918

Xylophanes tersa f. *tristis* Closs, 1918: Int. Ent. Z. 11(26): 241.

Holotype: ♂, Mexiko [box 556].

Individual form of *Xylophanes tersa* (Linnaeus, 1771) (Bridges 1993; Carcasson & Heppner 1996).

umbrata Gehlen, 1928

Celerio euphorbiae f. *umbrata* Gehlen, 1928: Int. Ent. Z. 21 (42): 401, pl.2, f. 4.

Holotype: ♀, Österreich, Kärnten, coll. Gehlen [box 571].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

unimacula Closs, 1915

Celerio euphorbiae f. *unimacula* Closs, 1915: Int. Ent. Z. 9 (1): 1.

Holotype: ♀, Deutschland, Berlin, 1913, e.l., coll. Gehlen [box 567].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

***variegata* Closs**

Holotype: ♀, Deutschland, Berlin, e.l. 1912, coll. Gehlen [box 567].

The original description could not be found. The type specimen is labeled *Celerio euphorbiae* f. *variegata* Closs. It is an individual form of *Hyles euphorbiae* (Linnaeus, 1758). This taxon is mentioned in 1913 (Int. Ent. Z. 7 (13): 89) by Closs himself and perhaps the name has been introduced in this article for the first time (nomen nudum). Not mentioned in Bridges (1993).

***virescens* Gehlen, 1930**

Celerio euphorbiae ab. *virescens* Gehlen, 1930: Int. Ent. Z. 24 (20): 219.

Holotype: ♀, coll. Gehlen [box 582].

Individual form of *Hyles euphorbiae* (Linnaeus, 1758) (Bridges 1993).

***viridis* Closs, 1911**

Mimas tiliae f. *viridis* Closs, 1911: Int. Ent. Z. 5 (38): 275.

Holotype: ♀, [Poland], Schlesien, Landeck, 18.05.1910, e.l., coll. Gehlen [box 250].

Individual form of *Mimas tiliae* (Linnaeus, 1758) (Bridges 1993).

III. Paratypes

***afghanistana* Daniel, 1958**

3 Paratypes. Box 495

Bridges (1993): *Rethera* Rothschild & Jordan, 1903 sp.

***amseli* Daniel, 1958**

1 Allotype, 3 Paratypes. Box 495

Bridges (1993): *Rethera* Rothschild & Jordan, 1903 sp.

***atrolimbata* Dannehl, 1929**

3 Paratypes. Box 576

Bridges (1993): *Hyles euphorbiae* (Linnaeus, 1758) f.

***bipartita* Gehlen, 1934**

1 Paratype, 458

Bridges (1993): *Daphnis nerii* (Linnaeus, 1758) ssp.

***borealis* Clark, 1929**

1 Cotype, 1 Paratype. Box 284

Bridges (1993): *Calasymphobolus excaecata* (Smith, 1797) ssp.

***borealis* Clark, 1929**

3 Paratypes. Box 116

Bridges (1993): *Ceratonia undulosa* (Walker, 1856) ssp. syn.

***borealis* Clark, 1929**

1 Cotype, 1 Paratype. Box 303

Bridges (1993): *Pachysphinx modesta* (Harris, 1839) ssp.

***borealis* Clark, 1929**

1 Cotype, 2 Paratypes. Box 280

Bridges (1993): *Smerinthus cerisyi* Kirby, 1837 syn.

brodiei Clark, 1929

1 Cotype, 1 Paratype. Box 477

Bridges (1993): *Darapsa choerilus* (Cramer, [1779]) ssp.

comoroana Clark, 1927

1 Paratype. Box 035

Bridges (1993): *Coelonia solani* (Boisduval, 1833) ssp.

confluens Dannehl, 1925

1 Cotype. Box 026

Bridges (1993): *Acherontia atropos* (Linnaeus, 1758) f.

continentalis Gehlen, 1930

1 Paratype. Box 491

Bridges (1993): *Eupanacra doherty* (Rothschild, 1894) ssp.

corumbensis Clark, 1922

1 Paratype. Box 117

Bridges (1993): *Neogene dynaeus* (Hübner, [1825]) ssp. syn.

dautchenkoi Eitschberger & Lukhtanov, 1996

1 Paratype. Box 415

Danner, Eitschberger & Surholt (1998): *Hemaris ducalis* (Staudinger, 1887) ssp.

efulani Clark, 1926

1 Paratype. Box 516

Bridges (1993): *Antinephele* Holland, 1889 sp.

elegans Gehlen, 1935

1 Paratype. Box 376

Bridges (1993): *Callionima grisescens* Rothschild, 1894 ssp.

excessus Gehlen, 1926

1 Paratype. Box 425

Bridges (1993): *Eumorphia satellitia* (Linnaeus, [1771]) ssp.

expallidata Dannehl, 1933

3 Paratypes. Box 603

Hyles vespertilio (Esper, 1780) f.

explicata Dannehl, 1933

4 Paratypes. Box 602

Hyles vespertilio (Esper, 1780) f.

fraxini Dannehl, 1925

2 Paratypes. Box 132

Bridges (1993): *Sphinx ligustri* Linnaeus, 1758 f.

fruhstorferi Clark, 1916

1 "Paratype". Box 166

Bridges (1993): *Orecta* Rothschild & Jordan, 1903 sp.

[This specimen is not type material, *O. fruhstorferi* was described from a single male now in the Carnegie Museum, Pittsburgh.]

***gerhardi* Barnes & Benjamin, 1924**

1 Paratype. Box 125

Bridges (1993): *Sphinx vashti* Strecker, [1878] syn.

***hakodoensis* O. Bang-Haas, 1936**

3 Paratypes. Box 140

Bridges (1993): *Sphinx pinastri* Linnaeus, 1758 ssp.

***hojeda* Gehlen, 1928**

1 Paralectotype. Box 540

Bridges (1993): *Xylophanes* Hübner, [1819] sp.

***indicus* Walker, 1856**

1 "Allotype". Box 235

Bridges (1993): *Marumba* Moore, [1882] sp.

[This specimen is not type material.]

***interrupta* Closs, 1911**

1 Paratype. Box 529

Bridges (1993): *Macroglossum hirundo* (Boisduval, 1832) f.

***joiceyi* Clark, 1924**

1 Paratype. Box 666

Bridges (1993): *Rhagastis everetti* Rothschild & Jordan, 1903 syn.

***joiceyi* Clark, 1932**

1 "Paratype". Box 642

Bridges (1993): *Hippotion* Hübner, 1819 sp.

[This specimen is not type material.]

***laotensis* Rothschild & Jordan, 1903**

1 "Allotype". Box 222

Bridges (1993): *Marumba timora* Rothschild & Jordan, 1903 ssp.

[This specimen is not type material.]

***lappona* Rangnow, 1935**

2 Paralectotypes. Box 296

Bridges (1993): *Amorpha populi* (Linnaeus, 1758) ssp.

***manifica* Brandt, 1938**

2 Paratypes. Box 495

Bridges (1993): *Rethera komarovi* (Christoph, 1885) ssp.

***mccrearyi* Clark, 1929**

1 Cotype. Box 286

Bridges (1993): *Paonias myops* (Smith, 1797) syn.

mccrearyi Clark, 1929

1 Paratype. Box 121

Bridges (1993): *Sphinx eremitus* (Hübner, [1823]) ssp.

meeki Rothschild & Jordan, 1903

1 Allotype. Box 493

Bridges (1993): *Angonyx Boisduval* [1875] sp.

moira Dannehl, 1925

1 Cotype. Box 026

Bridges (1993): *Acherontia atropos* (Linnaeus, 1758) f.

niepelti Gehlen, 1928

1 Paratype. Box 540

Bridges (1993): *Xylophanes fusimacula* (R. Felder, 1874) ssp.

obscura Closs, 1917

1 Cotype. Box 261

Bridges (1993): *Smerinthus kindermanni* Lederer, 1852 f.

obscura Dannehl

3 Paratypes. Box 603

Hyles hippophaes (Esper, 1793) f.

ochreata Mell, 1935

1 Paratype. Box 225

Bridges (1993): *Marumba* Moore, [1882] sp.

paganus Kernbach, 1957

1 Paratype. Box 394

Bridges (1993): *Enyo cavifer* Rothschild & Jordan, 1903 ssp.

pfeifferi Zerny, 1933

3 Cotypes, 1 Allotype. Box 515

Bridges (1993): *Sphingonaepiopsis gorgoniades* (Hübner, [1819]) ssp.

phalerata Kernbach, 1955

1 Paratype. Box 118

Bridges (1993): *Sphinx* Linnaeus, 1758 sp.

phillipinensis Rothschild & Jordan, 1903

1 Paratype. Box 198

Bridges (1993): *Polyptychus trilineatus* Moore, 1888 ssp.

poecilus Rothschild, 1898

1 Allotype. Box 257

Bridges (1993): *Callambulyx* Rothschild & Jordan, 1903 sp.

reconditus Kernbach, 1957

1 Paratype. Box 394

Bridges (1993): *Enyo cavifer* Rothschild & Jordan, 1903 ssp.

renneri Danner, Eitschberger & Surholt, 1998

54 Paratypes. Box 616

Danner et al. (1998): *Hyles* Hübner, [1819], 1817 sp.

rjabovi O. Bang-Haas, 1935

1 Cotype. Box 495

Bridges (1993): *Rethera komarovi* (Christoph, 1885) ssp.

rubiensis Dannehl

4 Cotypes, 10 Paratypes. Box 576

Bridges (1993): *Hyles euphorbiae* (Linnaeus, 1758) f.

saharae Günther, 1939

8 Paratypes. Box 589

Bridges (1993): *Hyles tithymali* (Boisduval, 1834) ssp.

samoanum Rothschild & Jordan, 1906

1 Paratype. Box 529

Bridges (1993): *Macroglossum hirundo* (Boisduval, 1832) ssp.

tonganum Gehlen, 1930

1 Paratype. Box 529

Bridges (1993): *Macroglossum hirundo* (Boisduval, 1832) ssp.

transcaspica O. Bang-Haas, 1927

1 Paratype. Box 657

Bridges (1993): *Theretra alecto* (Linnaeus, 1758) ssp.

witti Danner, Eitschberger & Surholt, 1998

2 Paratypes. Box 301

Danner, Eitschberger & Surholt, 1998: *Laothoe philerema* (Djakonov, 1923) sp.

zebra Clark, 1923

1 Cotype. Box 316

Bridges (1993): *Isognathus* Felder & Felder, 1862 sp.

IV. Synopsis

taxon	original name	author, year	type	box
<i>acra</i>	<i>Temnora reutlingeri acra</i>	Gehlen, 1934	syn	509
<i>afghanistana</i>	<i>Rethera afghanistana</i>	Daniel, 1958	para	495
<i>aguacana</i>	<i>Sesia titan aguacana</i>	Gehlen, 1944	type	407
<i>albescens</i>	<i>Celerio euphorbiae</i> f. <i>albescens</i>	Closs, [1917 ?]	holo	567
<i>albina</i>	<i>Pseudosphinx tetrio albina</i>	Gehlen, 1941	syn	315
<i>alegrensis</i>	<i>Xylophanes alegrensis</i>	Closs, 1915	holo	549
<i>amseli</i>	<i>Rethera amseli</i>	Daniel, 1958	allo, para	495
<i>annellata</i>	<i>Celerio euphorbiae</i> f. <i>annellata</i>	Closs, 1915	holo	567
<i>apiciplaga</i>	<i>Celerio euphorbiae</i> ab. <i>apiciplaga</i>	Gehlen, 1930	holo	582
<i>argentinica</i>	<i>Protoparce florestan argentinica</i>	Daniel, 1949	holo, allo, para	108
<i>atra</i>	<i>Pachylia ficus</i> f. <i>atra</i>	Gehlen	holo	352

taxon	original name	author, year	type	box
<i>atrolimbata</i>	<i>Celerio euphorbiae</i> ab. <i>atrolimbata</i>	Dannehl, 1929	para	576
<i>auriflua</i>	<i>Protoparce rustica</i> f. <i>auriflua</i>	Gehlen, 1930	holo	091
<i>barnesi</i>	<i>Protoparce barnesi</i>	Clark, 1919	no type	109
<i>bilineata</i>	<i>Xylophanes rothschildi</i> <i>bilineata</i>	Gehlen, 1928	type?	549
<i>bipartita</i>	<i>Daphnis nerii</i> f. <i>bipartita</i>	Gehlen, 1933	para	458
<i>borealis</i>	<i>Ceratonia undulosa borealis</i>	Clark, 1929	para	116
<i>borealis</i>	<i>Pachysphinx modesta borealis</i>	Clark, 1929	co, para	303
<i>borealis</i>	<i>Calasymbolus excaecata borealis</i>	Clark, 1929	co, para	284
<i>borealis</i>	<i>Smerinthus cerisyi borealis</i>	Clark, 1929	co, para	280
<i>borneensis</i>	<i>Oxyambulyx tattina borneensis</i>	Gehlen, 1940	type	178
<i>bossardi</i>	<i>Protoparce lefeburei bossardi</i>	Gehlen, 1926	holo	058
<i>brodiei</i>	<i>Darapsa pholus brodiei</i>	Clark, 1929	co, para	477
<i>cana</i>	<i>Oxyambulyx substrigilis cana</i>	Gehlen, 1940	type	175
<i>castanella</i>	<i>Theretra castanella</i>	Gehlen, 1942	syn	666
<i>celebensis</i>	<i>Oxyambulyx semifervens celebensis</i>	Jordan, 1919	no type	181
<i>centrosplendens</i>	<i>Protoparce centrosplendens</i>	Gehlen, 1940	type	095
<i>ceylonica</i>	<i>Marumba dyras ceylonica</i>	Kernbach, 1959	type	221
<i>charon</i>	<i>Acherontia atropos</i> f. <i>charon</i>	Closs, 1910	holo	025
<i>chinchilla</i>	<i>Protoparce chinchilla</i>	Gehlen, 1924	syntypes	095
<i>cinnamomea</i>	<i>Pholus satellita</i> f. <i>cinnamomea</i>	Closs, 1911	holo	437
<i>clara</i>	<i>Mimas tiliae</i> f. <i>clara</i>	Closs, 1917	holo	249
<i>comoroana</i>	<i>Coelonia solani comoroana</i>	Clark, 1927	para	035
<i>confluens</i>	<i>Acherontia atropos</i> [!] mod. <i>confluens</i>	Dannehl, 1925	co	026
<i>confluens</i>	<i>Daphnis nerii</i> f. <i>confluens</i>	Closs, 1912	holo	457
<i>confusa</i>	<i>Celerio euphorbiae costata</i> f. <i>confusa</i>	Gehlen, 1928	holo	591
<i>conjuncta</i>	<i>Celerio euphorbiae</i> ab. <i>conjuncta</i>	Lütkemeyer, 1920	holo	582
<i>connexa</i>	<i>Amplypterus gannascus</i> f. <i>connexa</i>	Closs, 1915	holo	156
<i>continentalis</i>	<i>Panacra dahertyi continentalis</i>	Gehlen, 1930	para	491
<i>coreana</i>	<i>Callambulyx tatarinovi coreana</i>	Gehlen, 1941	syn	259
<i>coronata</i>	<i>Amplypterus tigrina coronata</i>	Gehlen, 1930	syn	163
<i>corumbensis</i>	<i>Protoparce corumbensis</i>	Clark, 1928	no type	109
<i>corumbensis</i>	<i>Neogene dynaenus corumbensis</i>	Clark, 1922	para	117
<i>cubensis</i>	<i>Xylophanes tersa cubensis</i>	Gehlen, 1941	holo, para	558
<i>cyanea</i>	<i>Celerio dahli</i> ab. <i>cyanea</i>	Gehlen, 1927	holo	589
<i>dantchenkoi</i>	<i>Hemaris ducalis dantchenkoi</i>	Eitschberger & Lukhtanov, 1966	para	415
<i>decolorata</i>	<i>Celerio euphorbiae</i> f. <i>decolorata</i>	Closs, 1913	holo	567
<i>delanoi</i>	<i>Epistor lugubris delanoi</i>	Kernbach, 1962	holo, para	390
<i>diluta</i>	<i>Smerinthus ocellata</i> f. <i>diluta</i>	Closs, 1917	holo	267
<i>dispersa</i>	<i>Erinnyis alope dispersa</i>	Kernbach, 1962	holo, para	325
<i>distincta</i>	<i>Maassenia heydeni distincta</i>	Gehlen, 1934	syn	496
<i>dominicana</i>	<i>Protoparce rustica dominicana</i>	Gehlen, 1928	holo?	093
<i>eburnea</i>	<i>Psilogramma menephron</i> f. <i>eburnea</i>	Closs, 1911	holo	042
<i>efulani</i>	<i>Antinephele efulani</i>	Clark, 1926	para	516
<i>elegans</i>	<i>Hemeroplanes grisescens elegans</i>	Gehlen, 1935	para	376
<i>encantada</i>	<i>Erinnyis ello encantada</i>	Kernbach, 1962	holo, para	336
<i>exacta</i>	<i>Protoparce albiplaga</i> f. <i>exacta</i>	Gehlen, 1928	holo, para	097
<i>excessus</i>	<i>Pholus satellita</i> f. <i>excessus</i>	Gehlen, 1926	para	425
<i>exiguus</i>	<i>Protoparce lucretius exiguus</i>	Gehlen, 1942	syn	077
<i>expallidata</i>	<i>Celerio hippophaes</i> f. <i>expallidata</i>	Dannehl, 1933	para	603
<i>explicata</i>	<i>Celerio vespertilio</i> f. <i>explicata</i>	Dannehl, 1933	para	602
<i>extensa</i>	<i>Celerio deserticola</i> f. <i>extensa</i>	Closs, 1917	holo	588
<i>extincta</i>	<i>Herse corvolvuli</i> ab. <i>extincta</i>	Gehlen, 1928	holo	017
<i>extinctus</i>	<i>Pholus translineata</i> f. <i>extinctus</i>	Gehlen, 1927	holo	435

taxon	original name	author, year	type	box
<i>extrema</i>	<i>Protoparce extrema</i>	Gehlen, 1926	type	103
<i>falcata</i>	<i>Eurypteryx falcata</i>	Gehlen, 1922	syn	516
<i>falcifera</i>	<i>Haemeroplanes falcifera</i>	Gehlen, 1943	syn	381
<i>fasciata</i>	<i>Psilogramma menephron</i> f. <i>fasciata</i>	Closs, 1916	holo	043
<i>fassli</i>	<i>Xylophanes rothschildi fassli</i>	Gehlen, 1928	holo	549
<i>flavellus</i>	<i>Amphlypterus palmeri</i> f. <i>flavellus</i>	Gehlen, 1926	holo	160
<i>flavescens</i>	<i>Darapsa pholus</i> f. <i>flavescens</i>	Closs, 1911	holo	477
<i>flavosignata</i>	<i>Sesia fadus</i> f. <i>flavosignata</i>	Closs, 1916	holo	407
<i>florilega</i>	<i>Celerio lineata florilega</i>	Kernbach, 1962	holo, para	609
<i>formosana</i>	<i>Clanis bilineata formosana</i>	Gehlen, 1941	syn	186
<i>fraxini</i>	<i>Sphinx ligustri</i> ab. <i>fraxini</i>	Dannehl, 1925	para	132
<i>fruhstorferi</i>	<i>Orecta fruhstorferi</i>	Clark, 1916	no type	166
<i>fuliginosa</i>	<i>Protoparce sexta paphus</i> f. <i>fuliginosa</i>	Closs, 1917	holo	065
<i>fulvoescens</i>	<i>Amphlypterus gannescus</i> f. <i>fulvoescens</i>	Closs, 1915	holo	153
<i>fuscata</i>	<i>Theretra oldenlandiae fuscata</i>	Gehlen, 1941	syn	663
<i>gehleni</i>	<i>Sesia gehleni</i>	Closs, 1922	type	405
<i>gehleni</i>	<i>Rhagastus lunata gehleni</i>	Bender, 1942	type	671
<i>gerhardi</i>	<i>Sphinx gerhardi</i>	Barnes & Benjamin, 1924	para	125
<i>giganteomaculata</i>	<i>Celerio euphorbiae conspicua</i> ab. <i>giganteomaculata</i>	Gehlen, 1930	holo	585
<i>grandis</i>	<i>Protoparce grandis</i>	Daniel, 1949	holo	108
<i>grisea</i>	<i>Celerio euphorbiae</i> f. <i>grisea</i>	Closs, 1911	holo	567
<i>grisescens</i>	<i>Smerinthus ocellata</i> f. <i>grisescens</i>	Closs, 1915	holo	267
<i>hakodoensis</i>	<i>Sphinx caligineus hakodoensis</i>	O. Bang-Haas, 1936	para	140
<i>hannemanni</i>	<i>Xylophanes hannemanni</i>	Closs, 1917	holo	538
<i>heinrichi</i>	<i>Xylophanes heinrichi</i>	Closs, 1917	holo	561
<i>hojeda</i>	<i>Xylophanes hojeda</i>	Gehlen, 1928	paralecto	540
<i>indicus</i>	<i>Smerinthus indicus</i>	Walker, 1856	no type	235
<i>infernalis</i>	<i>Xylophanes anubus</i> f. <i>infernalis</i>	Gehlen, 1927	holo	547
<i>infumata</i>	<i>Proserpinus proserpina</i> f. <i>infumata</i>	Closs, 1911	holo	520
<i>intermedia</i>	<i>Anorpha populi intermedia</i>	Gehlen, 1934	syn	296
<i>intermissa</i>	<i>Theretra alecto intermissa</i>	Gehlen, 1941	syn	657
<i>interrupta</i>	<i>Macroglossa hirundo</i> f. <i>interrupta</i>	Closs, 1911	para	529
<i>interrupta</i>	<i>Amphlypterus gannascus</i> f. <i>interrupta</i>	Closs, 1915	holo	153
<i>jachani</i>	<i>Celerio euphorbiae</i> f. <i>jachani</i>	Closs, 1921	holo	567
<i>jankowskii</i>	<i>Clanis undulosa jankowskii</i>	Gehlen, 1932	syn	187
<i>joiceyi</i>	<i>Rhagastis joiceyi</i>	Clark, 1924	para	666
<i>joiceyi</i>	<i>Hippotion joiceyi</i>	Clark, 1924	no type	642
<i>krombachi</i>	<i>Celerio euphorbiae</i> f. <i>krombachi</i>	Closs, 1917	holo	567
<i>laotensis</i>	<i>Marumba timora laotensis</i>	Rothschild & Jordan, 1903	no type	222
<i>lappona</i>	<i>Amorpha populi lappona</i>	Rangnow, 1935	paralecto	296
<i>lemonia</i>	<i>Nyceryx lemonia</i>	Gehlen, 1941	type	399
<i>leucophila</i>	<i>Protoparce leucophila</i>	Gehlen, 1931	type	083
<i>libanotica</i>	<i>Celerio nicaea libanotica</i>	Gehlen, 1932	syn	600
<i>lineatoides</i>	<i>Celerio lineata lineatoides</i>	Gehlen, 1934	type	609
<i>luciae</i>	<i>Protoparce sexta luciae</i>	Gehlen, 1928	type	063
<i>luecki</i>	<i>Hippotion celerio</i> ab./f. <i>luecki</i>	Closs, 1912	holo	637
<i>luridus</i>	<i>Hippotion eson luridus</i>	Gehlen, 1943	type	638
<i>macromaculata</i>	<i>Oxyambulyx macromaculata</i>	Gehlen, 1940	type	174
<i>macrops</i>	<i>Calasymbolus myops macrops</i>	Gehlen, 1933	type	286
<i>magicus</i>	<i>Amphlypterus gannascus</i> f. <i>magicus</i>	Gehlen, 1928	holo	154
<i>mahadeva</i>	<i>Clanis mahadeva</i>	Gehlen, 1935	no type	189
<i>malatiatus</i>	<i>Hyles hippophaes malatiatus</i>	Gehlen, 1934	syn	605

taxon	original name	author, year	type	box
<i>manifica</i>	<i>Rethera komarovi manifica</i>	Brandt, 1938	para	495
<i>martini</i>	<i>Pachygonia martini</i>	Gehlen, 1943	syn	395
<i>mccrearyi</i>	<i>Calasymbolus myops mccrearyi</i>	Clark, 1929	co	286
<i>mccrearyi</i>	<i>Sphinx eremita mccrearyi</i>	Clark, 1929	para	121
<i>meeki</i>	<i>Angonyx meeki</i>	Rothschild & Jordan, 1903	allo	493
<i>meridionalis</i>	<i>Smerinthus planus meridionalis</i>	Closs, 1917	type	267
<i>meridionalis</i>	<i>Smerinthus kindermanni meridionalis</i>	Gehlen, 1931	type	263
<i>mexicana</i>	<i>Ampeloeca myron mexicana</i>	Gehlen, 1933	holo, co	475
<i>modestus</i>	<i>Polyptichus grayi</i> f. <i>modestus</i>	Gehlen, 1942	holo	200
<i>moira</i>	<i>Acherontia atropus</i> [!] mod. <i>moira</i>	Dannehl, 1925	co	026
<i>mollis</i>	<i>Amplypterus gannescus</i> f. <i>mollis</i>	Gehlen, 1928	holo	157
<i>montana</i>	<i>Mimas tiliae montana</i>	Daniel & Wolfsberger, 1955	holo, allo, para	253
<i>nebulosa</i>	<i>Celerio euphorbiae</i> ab. <i>nebulosa</i>	Gehlen, 1930	holo	567
<i>niepelti</i>	<i>Xylophanes fusimacula</i> f. <i>niepelti</i>	Gehlen, 1928	para	540
<i>norfolki</i>	<i>Xylophanes norfolki</i>	Kernbach, 1962	holo, para	558
<i>obscura</i>	<i>Celerio hippophaes</i> f. <i>obscura</i>	Dannehl	para	603
<i>obscura</i>	<i>Psilogramma menephron</i> f. <i>obscura</i>	Closs, 1915	holo	043
<i>obscura</i>	<i>Smerinthus kindermanni</i> g.aest. <i>obscura</i>	Closs, 1917	co	261
<i>obscurata</i>	<i>Acherontia atropos</i> f. <i>obscurata</i>	Closs, 1917	holo	030
<i>obscurata</i>	<i>Haemorrhagia croatica</i> f. <i>obscurata</i>	Closs, 1911	holo	415
<i>ochreatea</i>	<i>Marumba ochreatea</i>	Mell, 1935	para	225
<i>olivacea</i>	<i>Celerio euphorbiae</i> f. <i>olivacea</i>	Closs, 1917	holo	567
<i>orientis</i>	<i>Pholus obliquus orientis</i>	Daniel, 1949	holo, allo, para	432
<i>otiosus</i>	<i>Epistor bathus otiosus</i>	Kernbach, 1957	holo, para	393
<i>paganus</i>	<i>Epistor cavifer paganus</i>	Kernbach, 1957	para	394
<i>pallescens</i>	<i>Marumba quercus</i> f. <i>pallescens</i>	Closs, 1922	holo	232
<i>pallescens</i>	<i>Xylophanes pallescens</i>	Closs, 1917	type	561
<i>pallida</i>	<i>Pholus vitis</i> f. <i>pallida</i>	Closs, 1917	holo	442
<i>pallida</i>	<i>Pseudoclanis postica</i> f. <i>pallida</i>	Closs, 1918	holo	193
<i>pallida</i>	<i>Celerio euphorbiae</i> f. / ab. <i>pallida</i>	Closs, [1913 ?]	holo	582
<i>pallida</i>	<i>Herse cingulata</i> ab. <i>pallida</i>	Closs, 1917	holo	003
<i>pallidula</i>	<i>Protoparce incisa pallidula</i>	Daniel, 1949	holo, para	086
<i>paraguayensis</i>	<i>Xylophanes anubus paraguayensis</i>	Gehlen, 1933	syn	116
<i>perversa</i>	<i>Sphinx ligustri</i> ab. <i>perversa</i>	Gehlen, 1928	holo, allo	130
<i>pfeifferi</i>	<i>Sphingonaepiopsis gorgon pfeifferi</i>	Zerny, 1933	allo, co	515
<i>phalerata</i>	<i>Sphinx phalerata</i>	Kernbach, 1955	para	118
<i>phillipinensis</i>	<i>Polyptichus trilineatus phillipinensis</i>	Rothschild & Jordan, 1903	para	198
<i>poecilus</i>	<i>Callambulyx poecilus</i>	Rothschild, 1898	allo	257
<i>prestoni</i>	<i>Protoparce prestoni</i>	Gehlen, 1926	lecto, paralecto	086
<i>purpureosignata</i>	<i>Gurelca himachala sangaica</i> f. <i>purpureosignata</i>	Closs, 1917	holo	514
<i>rangnowi</i>	<i>Haemorrhagia croatica</i> f. <i>rangnowi</i>	Closs, 1911	holo	415
<i>reconditus</i>	<i>Epistor cavifer reconditus</i>	Kernbach, 1957	para	394
<i>reducta</i>	<i>Protoparce reducta</i>	Gehlen, 1930	type?	077
<i>reducta</i>	<i>Hemaris tityus</i> f. <i>reducta</i>	Closs, 1917	holo	410
<i>renneri</i>	<i>Celerio renneri</i>	Danner, Eitschberger & Surholt, 1998	para	616
<i>reussi</i>	<i>Xylophanes reussi</i>	Closs, 1920	holo	537
<i>rjabovi</i>	<i>Rethera komarovi rjabovi</i>	O. Bang-Haas, 1935	co	495
<i>rosea</i>	<i>Hippotion celerio</i> f. <i>rosea</i>	Closs, 1911	holo	635
<i>rosea</i>	<i>Pholus satellita analis</i> f. <i>rosea</i>	Closs, 1917	holo	426

taxon	original name	author, year	type	box
<i>rosea</i>	<i>Celerio euphorbiae deserticola</i> f. <i>rosea</i>	Closs, 1917	holo	588
<i>rubiaccensis</i>	<i>Celerio euphorbiae</i> f. <i>rubiaccensis</i>	Dannehl	para, co	576
<i>rubicunda</i>	<i>Amphypterus palmeri</i> f. <i>rubicunda</i>	Closs, 1916	holo	160
<i>rubicunda</i>	<i>Panacra elegantuldae</i> f. <i>rubicunda</i>	Closs	holo	492
<i>rubra</i>	<i>Celerio euphorbiae mauretanic</i> f./ab. <i>rubra</i>	Closs, 1918	holo	587
<i>rubrimargo</i>	<i>Amphypterus palmeri</i> f. <i>rubrimargo</i>	Gehlen, 1926	holo	160
<i>rufescens</i>	<i>Perigonia pallida rufescens</i>	Daniel, 1949	holo, para	401
<i>rydbergi</i>	<i>Protambulyx rydbergi</i>	Gehlen, 1933	syn	146
<i>saharae</i>	<i>Celerio deserticola</i> v. <i>saharae</i>	Günther, 1939	para	589
<i>samoana</i>	<i>Theretra oldenlandiae samoana</i>	Gehlen, 1941	type	663
<i>samoanum</i>	<i>Macroglossa hirundo samoanum</i>	Rothschild & Jordan, 1906	para	529
<i>septentrionalis</i>	<i>Pachylia syces septentrionalis</i>	Gehlen, 1943	syn	356
<i>sericus</i>	<i>Xylophanes sericus</i>	Gehlen, 1940	lecto	538
<i>sinensis</i>	<i>Celerio euphorbiae sinensis</i>	Closs, 1917	syn	586
<i>stigmaticus</i>	<i>Polyptichus stigmaticus</i>	Gehlen, 1940	type	210
<i>sumatrana</i>	<i>Marumba dyras sumatrana</i>	Gehlen, 1940	type	221
<i>syra</i>	<i>Haemorrhagia fuciformis syra</i>	Daniel, 1939	holo, co	413
<i>syriaca</i>	<i>Amorpha populi syriaca</i>	Gehlen, 1932	syn	296
<i>tessmanni</i>	<i>Theretra tessmanni</i>	Gehlen, 1927	no type	653
<i>tonganum</i>	<i>Macroglossum hirundo tonganum</i>	Gehlen, 1930	para	592
<i>transcaspica</i>	<i>Theretra alecto transcaspica</i>	O. Bang-Haas, 1927	para	657
<i>trigon</i>	<i>Pholus achenon trigon</i>	Gehlen, 1926	holo	436
<i>trinitatis</i>	<i>Xylophanes neoptolemus trinitatis</i>	Closs, 1917	holo	562
<i>tristis</i>	<i>Xylophanes reversa</i> f. <i>tristis</i>	Closs, 1918	holo	556
<i>tupaci</i>	<i>Pholus fasciatus tupaci</i>	Kernbach, 1960	holo, para	445
<i>umbrata</i>	<i>Celerio euphorbiae</i> f. <i>umbrata</i>	Gehlen, 1927	holo	571
<i>unimacula</i>	<i>Celerio euphorbiae</i> f. <i>unimacula</i>	Closs, 1915	holo	567
<i>variegata</i>	<i>Celerio euphorbiae</i> f. <i>variegata</i>	Closs, [1913 ?]	holo	567
<i>versicolor</i>	<i>Callambulyx tatarinovi versicolor</i>	Gehlen, 1941	type	259
<i>vespertilio</i>	<i>Sphinx vespertilio</i>	Esper, 1779	holo	Esp. 14
<i>virescens</i>	<i>Celerio euphorbiae</i> ab. <i>virescens</i>	Gehlen, 1930	holo	582
<i>viridis</i>	<i>Mimas tiliae</i> f. <i>viridis</i>	Closs, 1911	holo	275
<i>vogli</i>	<i>Protoparce florestan vogli</i>	Daniel, 1949	holo, allo, para	107
<i>witti</i>	<i>Laothoe philerema witti</i>	Danner, Eitschberger & Surholt, 1998	para	301
<i>yupanquii</i>	<i>Pholus labruscae yupanquii</i>	Kernbach, 1962	holo, para	450
<i>zebra</i>	<i>Isognatus zebra</i>	Clark, 1923	co	316

Zusammenfassung

Die vorliegende Arbeit ist eine Liste aller in der Zoologischen Staatssammlung München (ZSM) befindlichen Typenexemplare der Familie Sphingidae (Lepidoptera, Insecta). Aufgeführt werden 79 namenstragende Typen verfügbarer Taxa, sowie 65 Holotypen infrasubspezifischer Taxa, jeweils mit ihrer aktuellen systematischen Stellung. 54 Taxa liegen nur als Paratypen vor. In der Synopsis sind alle 198 in der ZSM durch Typen repräsentierten Taxa alphabetisch und mit der zugehörigen Kastenummer aufgeführt. Insgesamt befinden sich mit den Paratypenserien 417 Typenexemplare (Sphingidae) in der ZSM. Alle Etikettendaten sind in der ZSM auf Datenbank verfügbar und zugänglich (MS Access).

Acknowledgements

The authors wish to thank Dr. Ian Kitching, BMNH, for numerous comments and revision of the whole manuscript, Dr. Ulf Eitschberger for professional help especially in providing literature, and Dipl. Ing. Kurt Kossner for financial support. The work of the first author was supported by a grant of the association "Freunde der ZSM e.V."

References

- D'Abrera, B. 1986. *Sphingidae mundi*. Hawk moths of the world. – Melbourne
- Bridges, C. A. 1993. Catalogue of the Family-Group, Genus-Group and Species-Group names of the Sphingidae of the World. – Illinois
- Cadiou, J.-M. & J. Haxaire 1997. Description of new taxa in the genera *Paonias*, *Nyceryx* and *Xylophanes* with a revision of associated species (Lepidoptera, Sphingidae). – *Lambillionea* **97**: 569-584
- Carcasson, R. H. & J. B. Heppner 1996. Sphingoidea. In: J. B. Heppner (ed.): *Atlas of Neotropical Lepidoptera: Sphingoidea*. – Gainesville
- Danner, F., Eitschberger, U. & B. Surholt 1998. Die Schwärmer der westlichen Paläarktis. Bausteine zu einer Revision (Lepidoptera: Sphingidae). – *Herbipoliana* **4** (I/II), Marktleuthen
- Eitschberger, U. & Lukhtanov, V. A. 1996. Neue Unterarten und Namen bei westpalaearktischen Sphingiden (Lepidoptera, Sphingidae). – *Atalanta* **27** (3/4): 615-621
- International Commission on Zoological Nomenclature (ICZN) 1985. *International Code of Zoological Nomenclature*, 3rd edition. – Berkeley and Los Angeles
- Kitching, I. J. & Cadiou, J.-M. In press. *Hawkmoths of the world: An annotated and illustrated revisionary checklist* (Lepidoptera: Sphingidae). – Ithaca
- Pittaway, A. R. 1993. *The Hawkmoths of the Western Palaearctic*. – Colchester
- Rothschild, L. W. 1919. List of types of Lepidoptera in the Tring Museum, I. Sphingidae. – *Novitat. Zool.* **26**: 193-251
- Viette, P. E. L. & C. Guillermet 1996. *Lépidoptères Hétérocères de la Réunion (=Bourbon)*. – Soc. réun. Amis Mus., Saint Denis

Plate 1

(scale bar = 1 cm)

- Fig. 1:** *Theretra castanella* Gehlen, 1942, syntype
- Fig. 2:** *Protoparce centrosplendens* Gehlen, 1940, 'type', actually retained as synonym of *Manduca brunalba* (Clark, 1929)
- Fig. 3:** *Adhemarius tigrina coronata* (Gehlen, 1930), syntype
- Fig. 4:** *Eurypteryx falcata* Gehlen, 1922, syntype
- Fig. 5:** *Callionima falcifera* (Gehlen, 1943), syntype

Plate 2

(scale bar = 1 cm)

- Fig. 6:** *Aellopos gehleni* (Closs, 1922), 'type'
- Fig. 7:** *Nyceryx lemonia* Gehlen, 1941, 'type', actually retained as synonym of *Nyceryx continua* (Walker, 1856)
- Fig. 8:** *Hyles nicaea libanotica* (Gehlen, 1932), syntype
- Fig. 9:** *Xylophanes norfolki* Kernbach, 1962, holotype
- Fig. 10:** *Manduca reducta* (Gehlen, 1930), 'type' (?)
- Fig. 11:** *Eumorpha labruscae yupanquii* (Kernbach, 1962), holotype





Holotypus
Zeuxis gahleri Claret
Zool. Staatssammlung München

Coll. Gahler
Rio Ingo
Boliv.

Zehle
Type elon



Holotypus
Kernbach's
Isomira Gahleri
Zool. Staatssammlung München

Coll. Gahler

Zeuxis leucosticta Zehle
Bolivien 8. 1921

Kernbach det. 1914
Myrmec. Gahleri
M. G.



Holotypus
Cel. nicaea
xylophana nicaea Gahler
Zool. Staatssammlung München

Syria
Zahls
Libanon or.

Coll. Gahler
Celox nicaea
libanotica
8. Type Gahler

21. VIII. 50.
Zoologische
Staatssammlung
München



K. Kernbach det. 60
Xylophanes
morfolki K6

Holotypus
Xylophanes
morfolki Kernb.
Zool. Staatssammlung München

Galapagos-Inseln
Santa Cruz
Finca Castro
200 m. 3. 1959
leg. J. Foerster

Typus



Typus n.
Protop. rosulata
Zoologische Gahler
Staatssammlung
München.

Coll. Gahler
Peru

Typus



Holotypus
Pholis labruscae
yuparagui K6.
Zool. Staatssammlung München

Galapagos-Inseln
Santa Cruz
Academia Bay
8. 1959
leg. J. Foerster

K. Kernbach det. 60
Pholis labruscae
yuparagui K6

Typus